ANIMATING A CLASSLESS SOCIETY:

A COMPARATIVE ANALYSIS OF METAMORPHOSIS OF (POST) HUMAN BODIES IN *THE MATRIX TRILOGY* AND *THE ANIMATRIX*

By

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Anneme ve Babama / For My Parents

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ABSTRACT

This study involves the comparative analysis of the (post)human bodies and their metamorphosis as they are represented in the live-action and computer animated films that were released mostly in 2000s. The analyses are done through a case study and a focus group study.

The case study involves the analysis of selected sequences from *The Matrix Trilogy* (1999, 2003) and *The Animatrix* (2003). The sequences of metamorphosis are analyzed in terms of their implications about the blurring boundaries of human and machine and the "freedom" and / or fear that is associated with this hybridization. In this context, the real flesh and bone bodies of the live-action films are juxtaposed to the fluid and virtual bodies of the animation films.

The focus group study, which involves three separate groups of mine-workers, housewives and high school students who were asked to react and interpret selected scenes from *The Matrix Trilogy* and *The Animatrix* and it aims to present the influences of class difference in defining a new cultural understanding of how people associate freedom and technology in Turkey.

Is metamorphosing about getting adapted to a new social system or is it a reaction to the social and political changes that are imposed on the body? How does the gradual metal-morphing of the body as it is reflected on the screen deal with the issues of freedom, bodily ambiguation, boundary breaking that are associated with "becoming" post-human? What role can animation as a popular art form claim in terms of being prosthesis for human body and/or mind or the externalization of the mind? These are the questions that this thesis tries to answer through the comparison of the metamorphosing post/human bodies as presented in different media of live action, animation and live-action and animation hybrids.

SINIFSIZ BİR TOPLUMU CANLANDIRMAK:

MATRIX ÜÇLEMESİ ve *ANİMATRİX* FİLMLERİNDEKİ İNSAN-SONRASI VÜCUTLARIN METAMORFOZUNUN KARŞILAŞTIRMALI ANLATIMI

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ÖZ

Bu tez, çoğu 2000'li yıllarda gösterime girmiş olan gerçek - oyunculu film ve 2 ve/veya 3 boyutlu bilgisayar animasyonu teknikleri ile yapılmış filmlerde insan-sonrası vücutların metamorfozunu incelemektedir. Analizler oluşturulan teorik çerçeveye eşlik eden vaka çalışması ve odak grup çalışması yoluyla gerçekleştirilmiştir.

Vaka çalışması *Matrix Üçlemesi* (1999, 2003) ve *Animatrix* (2003) filmlerinden seçilmiş metamorfoz içeren sekansların analizlerini içermektedir. Bu sekanslar insan ve makinanın kaybolan sınırları ve insan ve makinanın bileşimi ile bağdaştırılan özgürlük ve /veya korkunun sunumu bakımından incelenmektedir. Bu çerçevede gerçek-oyunculu filmlerdeki etten kemikten vücutlarla canlandırma filmlerdeki sanal ve akışkan vücutlar karşılaştırılmaktadır.

Maden işçileri, ev hanımları ve lise öğrencileri olmak üzere üç ayrı grupla yapılmış olan odak grup çalışmasında ise katılımcılardan *Matrix Üçlemesi* ve *Animatrix* filmlerinden seçilmiş olan sahneleri yorumlamaları istenmiştir. Bu çalışma, Türkiye'de sınıf farkının özgürlük ve teknolojinin nasıl bağdaştırıldığıyla ilgili yeni bir kültürel anlamlandırmanın tanımı üzerine etkilerini sunmayı hedeflemektedir.

Metamorfoz yeni bir sosyal sisteme adapte olma süreci ile mi ilgilidir yoksa vücut üzerine empose edilen sosyal ve politik değişimlere karşı geliştirilen tepkiyi mi temsil eder? Ekrana yansıtıldığı şekliyle, post-insan'laşma (post-human) ile ilişkilendirilen vücudun metal-morfozu özgürlük, vücutsal sınırların belirsizleşmesi gibi konuları nasıl ele almaktadır? Populer bir sanat formu olarak animasyon insan vücuduna ya da zihnine protez olma ya da zihnin dışa vurumu ile ilgili olarak nasıl bir rol üstlenebilir? Bu çalışma, dönüşen insan-sonrası vücutların gerçek oyunculu film, animasyon ve animasyon- gerçek-oyunculu film bileşimi tekniklerle sunumlarının karşılaştırılması yoluyla bu sorulara yanıt vermeye çalışmaktadır.

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0. INTRODUCTION

This thesis presents an analysis of the metamorphosis of the (post)human body in the live action and animated films released mostly in the 2000s. Along with the account of historical evolution of the way in which bodily metamorphosis is displayed in the films, the thesis will also analyze the relation of animated characters to "being or defining subject" by selecting scenes from *The Matrix Trilogy*[1] and *The Animatrix*[2]. The issues of the blurring boundaries between human and machine is discussed through the comparisons of human flesh and bone bodies in the live action film *The Matrix Trilogy* and the animated bodies of the Animatrix. This comparative analysis will also focus on other forms of animations such as stop motion in which puppets become "actors". In order to set the historical ground for a better explanation of the field and to be able to draw attention to the adoption of metamorphosis for diverse purposes such as the expression of emotions and "changing" thoughts or ideologies other film analyses are also overviewed.

Animation in this thesis is considered and analyzed as a medium able to provide multiple spaces of reality. Analysis of both stop-motion animation and computer generated animation are included in order to be able to present a comparative analysis of representation and understanding of the human bodies in contemporary society. The differences between these two forms of animation are used to draw parallels and trace the "machinization" and thus hybridization of the human body both as represented in films and in real life. Bodies represented in the stop-motion animation films are linked more to a concept of representation of the flesh while computer generated animations of

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[1] *The Matrix*, DVD, directed by Andy and Larry Wachowski (1999, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

The Matrix Reloaded, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

The Matrix Revolutions, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

[2] The Animatrix, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

the body are evaluated as hybrid forms of human body similar to cybernetic organisms (cyborgs).

In this context, The Matrix Trilogy is analyzed as a live action-animation hybrid. When it is compared to other films such as *Evil Dead Series*[3] and *Mary Shelley's Frankenstein*[4] whose major characters are monsters such as Frankenstein monster or zombies[5], the focus of metamorphosis is on the ability to manipulate the body and (questioning the concept of) "freeing" the mind by means of redesigning the body. The film rather than focusing on the monstrosity of the body, which is the result of the metamorphosis experienced, presents a vision of evolution and hybridization processes between humans and machines that as a result disjoins the representation and physical relation between mind and the body. Ultimately it is not the body, but the mind that is affected and transformed by the metamorphosis.

In the Matrix films human beings do not morph into post-humans because their bodies or minds are occupied by some evil spirits. They do not morph into zombies or other scary creatures either, however still they are on the verge of being considered as monsters posing the question of a replacement of the world of nature with that of artificiality. Human's bodily integrity is terminated by and through machines. The bodily boundaries of human beings in The Matrix Trilogy are no longer based on traditional dichotomies of humans and natural and artificial. These traditional boundaries are blurred and no longer apply.

The animated and live-action bodies are analyzed in terms of the way the post/human bodies are represented. The changes in the animation forms that are brought along with software development are traced in order to suggest a human- machine hybridity on the animation space. Software development and its effects on animation genre are also examined to detect possible ways in which the transition from humanity to post-humanity is culturally represented within and outside the animation space.

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[3] *Evil Dead Series*, DVD, directed by Sam Raimi (1979-1992, USA, New Line Cinema).

[4] *Mary Shelley's Frankenstein*, DVD, directed by Kenneth Branagh (1994, USA, Tristar Pictures).

The relation of animation and software development is also one of the basic reasons for the inclusion of stop-motion animation in this study. The reality of the stop-motion puppets and animation set is juxtaposed to the fluid bodies and virtual reality of the computer generated animation. Animator's, animation space's and the animated bodies' interaction with and relation to reality and imagination and their ways of "freeing the mind" are analyzed in relation to each other and to the constructed environment in which they are "built".

The studied scenes from the live-action films, on the other hand, are not purely live action. In all of the analyzed scenes animation's intervention at the point of the metamorphosis of the human body is visible. Different forms of human-machine hybridities are claimed to be formed in the artificial hybrid space of live-action and animation.

All of these analyses of the selected scenes are to present a relation between the representations of the human body and its metamorphosis and the possible implications of these metamorphosed bodies in terms of gaining subjectivity and individual freedom in the published system. Is metamorphosing about getting adapted to a new social system or is it a reaction to the social and political changes that are imposed on the body? How does the gradual metal-morphing of the body as it is reflected on the screen deal with the issues of freedom, bodily ambiguation, boundary breaking that are associated with "becoming" post-human? What role can animation as a popular art form claim in terms of being prosthesis for human body and/or mind or the externalization of the mind? These are the questions that the thesis tries to answer through the comparison of the metamorphosing post/human bodies as presented in different media of live action, animation and live-action and animation hybrids.

A focus group study is the supporting element to the critical and cultural analysis of animation bodies. Three groups were included. The first group consisted of housewives while the second group was miners and the third group was high school students. They were shown scenes from *The Matrix Trilogy* and *The Animatrix* which included the metamorphosing human bodies and were asked to react and interpret these scenes. The discussion of these scenes was followed by definition of individual and

collective freedom and the effect of technology in the re-definition of the concept of freedom.

The focus group study which was done in Manisa, Soma a small town of Turkey, offers the opportunity to analyze what are the influences of class difference in defining a new cultural understanding of how people associate freedom and technology in Turkey.

0.1: Aim and Scope

This study aims to draw attention to the animation along with the technological evolution it has experienced in relation to post-humanity and its representations on the screen. It is considered that both animation as a new media and class difference which might affect, if not determine, people's reactions towards technology and their access to technology are slightly overlooked. For this reason, the analysis of the post-human bodies in terms of metamorphosis is done through the study of morphs in the selected scenes of the movies.

The focus group studies were done with housewives, mine-workers and 17 year-old high school students. The primary reason for choosing mine-workers as participants is the conflict between workers and machines which has become an issue since the industrial revolution. The housewives were chosen because of the assumption that they are among the social groups which has the least amount of access and thus understanding and interpreting technology. The high school students, on the other hand were included in the study in order to be able to compare different age groups reactions to the same scenes and technology.

Including both a case study and a focus group study on the other hand, aims to analyze the ways the virtual space of cinema and animation connects to the minds of people from different age groups, gender and occupations. The focus group study aims to serve as the films' connection to "reality".

0.2: List of Terms

Trans-humanism: As defined in Nick Bostrom's article *Transhumanist Values*, transhumanism which regards human nature as a work in progress, is an interdisciplinary approach that tries to understand and assess the opportunity and the possibility of improving human condition and the human organism with the advancement of technology. Transhumanists think that science and technology can make the humanity reach post-humanity.

In this study, the mentioned improvement refers to the human intellectual, physical and emotional capacities as they are represented in the stop-motion and CG animation and live-action and live-action- animation hybrid films. Considering the fact that animation is very much under the influence of software development, animated bodies and their metamorphosis are analyzed in accordance with the values and physical and social changes that are anticipated and/or to some extent determined by trans-humanism.

Post-humanity: Katherine Hayles defines four features of post-human view all of which are made used of for the purpose of this study:

- Privileging informational pattern over material instantiation;
- considering consciousness as an evolutionary upstart trying to claim that it is the whole show when actually it is only a minor side show;
- thinking the body as the original prosthesis we all learn to manipulate;
- configuring human being so that it can be seamlessly articulated with intelligent machines;

In addition to these four features, she also states that in the post-human there are no essential differences between bodily existence and computer simulation; however, also one does not have to be a literal cyborg in order to be a post-human either. In this study, both of these ideas are re-considered in terms of the technology-animation-animator relation.

The difference between trans-human and post-human is that trans-human stands between un-augmented human being and post-human which makes the post-humanity the following step of trans-humanism.

Both trans-humanism and post-humanism are two of the terms that are used in this study to explain the border crossings that are represented through technology and the human body on the screen.

Disembodiment: Distillation of human essence into some immaterial form. It refers to liberation from the limitations of physical world and mortality via computationally generated consciousness. This is also supposing that mental realm is independent of the physical world. In this study the idea of disembodiment is addressed in connection with the concept of externalization of the mind.

Freedom: It refers both to the individual choice and freedom from society's expectations and freedom from limitations imposed by our biological nature. However, the subjects of the focus group were not presented with a pre-determined idea of freedom, instead they were asked to make their own definitions of individual and social freedom.

Morphing, Ani-morphing and Mutating: In this study metamorphosis refers to two different ways of transformation which are morphing and mutating. For this study Marsha Kinder's definition of *morphing* and *mutating* are adopted. Morphing is associated with the high tech mode of transformation which is more about empowerment rather than appearance while mutation is treated as part of a natural process.

The term ani-morph, on the other hand, is the shortened noun form for animated metamorphosis as defined by Norman M. Klein. It refers to the animated cycle where metamorphosis takes place. Ani-morphing of not only the body but also the space is included in the analysis of the scenes from animated films.

Eugenics The attempt to improve the human species by controlled selective breeding; historically, by encouraging the "fittest" to have more children and sterilizing or killing

those considered genetically "unfit." New genetic technologies could have eugenic applications.[6]

Orthodox Animation: is associated with Disney-like, characteristically realist films that follow conventional ways of narration and make the story more visible instead of the style, or aesthetic issues. This type of animation also adopts a single style instead of forming hybrids of 2D or 3D. Orthodox animations are also known to emphasize the industrial aspect of the animated films.[7]

Experimental Animation: as opposed to orthodox animation, can get irrational, illogical and/or surrealist. The importance is put on style, colours, shapes and texture and multiple styles that are employed in order to be able to challenge the conventions of orthodox animation while creating new effects. It is claimed that the development of technology liberated the experimental animators and lead to "innovative approaches to animation."[8]

However, it should be noted that at the moment it is not that easy to distinguish and label animation styles as orthodox or experimental as the boundaries between genres are also blurred. For instance both *The Matrix Trilogy* and *The Animatrix* series adopt some features of Japanese anime which was formerly regarded as "limited animation" but then has become a style that is defined as a highly abstract form of narration because of the fewer in-betweens in the drawings. Both series also adopt the features of live action, 3D and 2D animations as a result of which both *The Matrix Trilogy* and *The Animatrix* becomes hybrids in terms of style and medium.

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[6] Richard Hayes, "Our Biopolitical Future: Four Scenarios," *World Watch Magazine* (March/April 2007).

[7] Paul Wells, *Understanding Animation,* (New York : Routledge,1998), 35-42.

[8] Ibid., 42-52.

CHAPTER I : ON POST-HUMANISM

I.I: From Trans-humanity to Post-humanity

In historical accounts of post-humanist or trans-humanist views it is possible to encounter many texts starting with the explanation of never-ending human desire for extending, expanding, augmenting their mental, physical and / or spiritual capacities. In other words it is underlined that the idea and search for transcending or superseding the human is not new.

Nick Bostrom, for example, in his article *A History of Transhumanist Thought* considers the human desire for acquiring new capacities as ancient as the human species itself. [9] In the article, Sumerian *Epic of Gilgamesh* is cited as a very ancient example of search for immortality. According to the epic a king goes on a journey to find a plant that is supposed to provide him immortality. He finds the plant which is under the sea; however a snake steals it before he can eat it. The experiments of alchemists who tried to find remedies for illnesses and transform materials, Taoism in China, the expeditions for the purpose of finding the Fountain of Youth can be listed as other examples for the strives that people went through since ancient times in order to transcend the boundaries of being a human. [10] Although the terms "trans-human" or "post-human" is not used yet what they have been striving is very similar to the ideas that are associated with post- and / or trans-humanity.

Nick Bostrom states that the term "trans-human" was, most probably, used by Aldous Huxley's brother Julian Huxley for the first time in *Religion Without Revelation* (1927). Julian Huxley tries to come up with a term to define the entire development and transcendence of humanity and chooses "trans-humanism":

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[9] Nick Bostrom, "A History of Transhumanist Thought", *Journal of Evolution and Technology* 14, no.1 (April 2005),1.

[10] Ibid.,2.

> The human species can, if it wishes, transcend itself – not just sporadically, an individual here in one way, an individual there in another way – but in its entirety, as humanity. We need a name for this new belief. Perhaps *transhumanism* will serve: man remaining man, but transcending himself, by realizing new possibilities of and for his human nature.[11]

In this definition, Julian Huxley introduces trans-humanism as a "belief" that will carry the humanity as a whole out of its boundaries. It is also explicated that the mentioned boundary crossing will not be the end of humanity, but a chance to gain the ability of manipulating the human nature. In this sense it is also close to Nick Bostrom's definition of trans-humanity in the article *Transhumanist Values* as human nature as a work in progress. In this context, post-humanity is considered to be the next step to trans-humanism which can be achieved by "responsible" use of developments in science and technology.[12]

Bostrom claims that trans-humanity has its roots in the rational humanism which puts a lot of emphasis on learning about nature by means of empirical science and critical reasoning.[13] He bases this argument on Francis Bacon's *Novum Organum- The New Tool* which was published in 1620 and which advocates the idea that science can be used to reign over nature and thus improve the living condition of human beings. This idea was followed by Condorcet's questioning of the possibility of extending the life span of humans and Julien Offray de la Mettrie's argument that it might be possible for humans to manipulate their own nature just like they manipulate external objects. [14] As a result, the human body would also become object of science and it would be controlled for achieving extended life span and experience, gaining more liberty and freedom to form blurred bodily boundaries.

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[11] Julian Huxley, *Religion Without Revelation* (California: Greenwood Press Release,1927) as cited in Nick Bostrom, "A History of Transhumanist Thought", *Journal of Evolution and Technology* 14, no.1 (April 2005), 6.

[12] Nick Bostrom, "Transhumanist Values," June 23, 2005, http://www.transhumanism.org, http://www.transhumanism.org/index.php/WTA/more/transhumanist-values/, (accessed November 16, 2008).

[13] Nick Bostrom, "A History of Transhumanist Thought", *Journal of Evolution and Technology* 14, no.1 (April 2005), 2.

[14] Ibid.,3.

Space travel, medicine, computers, nanotechnology, artificial intelligence, robots, genetic engineering as tools of transforming human condition, have inevitably become parts of trans-humanist and post-humanist arguments. While super intelligence, molecular nanotechnology, and possibility of uploading the human consciousness have not been achieved yet there are number technologies that are present or expected to be present in near future such as virtual reality, prosthetics, performance enhancing drugs, cosmetic surgeries, sex change operations, anti-aging medicine, closer computer-human interfaces.

The possibility of transformation has called for the need of defining trans-human and trans-human values and becoming post-human. The issues of present cultural values and life style and their evolution with the human beings themselves emerge as another questionable aspect of trans-humanity. [15]

FM, conceives trans-human as a link in the evolutionary line of humans transforming into post-humans. According to him, the signs of being a trans-human are "prosthesis, plastic surgery, intensive use of telecommunications, a cosmopolitan outlook and a globetrotting lifestyle, androgyny, mediated reproduction, absence of religious belief, and a rejection of traditional family values."[16] All these features are claimed to make trans-humans closer to being post-humans. It can be said that mentioning family values and religious belief is what makes this definition distinctive. As Bostrom states, the reasons of change in values are not explained or hinted, however, still this definition expands the scope of the discussion about trans-humanity.

The World Transhumanist Association, which was founded in 1998 by Nick Bostrom and David Pearce, also defines the basic principles of trans-humanism. *The Trans-humanist Declaration*[17] (please see appendix A) includes 7 principles which

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[15] Nick Bostrom, "A History of Transhumanist Thought", in *Journal of Evolution and Technology* 14, no.1 (April 2005),11.

[16] FM, *Are you a Transhuman?Monitoring and Stimulating Your Personal Rate of Growth in a Rapidly Changing World* (New York: Warner Books, 1989) as cited in Nick Bostrom, "A History of Transhumanist Thought", *Journal of Evolution and Technology* 14, no.1 (April 2005), 11.

[17] One of the founding documents of World Trans-humanist Association.

address both the technological and moral questions and doubts associated with human beings' evolving into trans-humans. The declaration advocates the necessity of technology's usage for extension of mental and physical capacities without ignoring the moral, social and political dilemmas brought about within this transformation into post-humans.

In a similar manner to *The Trans-humanist Declaration*, *Transhumanist Values* which was written in 2002, both the possibilities, conditions and values of trans-humanity are defined. Life span[18], intellectual capacity, bodily functionality[19], sensory modalities, special faculties and sensibilities, mood, energy and self-control are among the possibilities of enhancement of human beings in their transformation into post-humans.

Global security, technological progress and wide access, on the other hand, are listed to be fundamental conditions for the actualization of the trans-humanist project. The main concern about the security is the existential risk which refers to the extinction of intelligent life on earth, in other words complete replacement of human beings with machines or other artificially produced intelligences. Because of this, global security is considered as the most basic condition for the implementation for trans-humanism to occur.

It is also underlined that wide access to the opportunities presented by trans-humanist project is very significant in order to be able to reduce the inequalities, emphasize the respect for individual humans. Wide access also stresses the moral urgency of the transhumanist project. It is stated that everyday 150.000 people die on our planet without having access to the enhancements that trans-humanism promises. However, according to Bostrom, this situation should not stop or restrict the

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[18] It is assumed that aging is an obstacle for the human character development, and thus it is considered that longer life can provide people with the opportunity of growing in character and mind.

[19] It is considered that we can upgrade ourselves in the way we wish. For instance it will be possible to get rid of genetically determined characteristics of our bodies. When/if it becomes possible for people to upload themselves, we will get rid of every restriction of bodily existence.

implementation of the project since it is believed that the sooner it develops the sooner it will reach more people. [20]

The core value of trans-humanity, on the other hand, is said to be "exploring the post-human realm".[21] The transformations that will make humans post-humans will not necessarily mean that humans will abandon their present values. However, it is also quite debatable that the post-human being will be the same human being although s/he is originated from the human being. This issue also implies that neither human beings nor the post-human beings will be favored over each other.

It is claimed that with the increased life span, intelligence, memory, health and emotional sensitivity will enable people develop more and maybe "explore the otherwise inaccessible realms of value".

Thus, trans-humanism is considered as a project that advocates the enhancement of humanity in terms of body and mind in a collective manner but with respect to individual choice and freedom. It aims to improve human capacities, save human lives and go deeper in philosophical thinking and education. As a result, humanity will gradually grow into post-humanity which, based on these discussions, can be considered as the following phase of trans-humanity.

Although these terms seem to provide conceptual frameworks for the transformations that people go through, it is not that easy to distinguish present human beings from the trans-humans or post-humans. As Bostrom also states, the terms create confusion rather than clarity. On the other hand, when the constant change that humanity is experiencing is considered, it seems quite natural that terms fail to be associated with fixed definitions. In the following part diverse definitions and utopian and dystopian understandings of post-humanism are reviewed for the purpose of setting the ground for the following discussions.

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[20] Nick Bostrom, "Transhumanist Values," http://www.transhumanism.org, June 23, 2005, http://www.transhumanism.org/index.php/WTA/more/transhumanist-values/ (accessed November 16, 2008).

[21] Ibid. p.5

I.2: Posthumanism: Utopia or Dystopia?

Opposite to what might be expected, post-humanity is not considered to be the final stage that humanity can achieve through medical or technological enhancements or hybridizations. Similar to trans-humanity which emphasizes the idea of human nature as a work in progress, discussions about post-humanity also conceives human beings as in constant change rather than an end or a final destination for humanity.

On the other hand, when the literal meaning of the word is considered, the word "post-human", as Katherine Hayles also explains, is associated with the idea of superseding and transcending the human. Although this definition looks very similar to that of trans-humanity, post-humanity brings about more arguments about the condition of the "human".

Does the prefix post- refer to the end of humanism or the completion and fulfillment of it? Is going beyond humanism already a part of humanism or is it the end of the stable definitions attributed the humanism?[22] Should we associate post-humanity necessarily with the absence of humanity? These are some of the questions that are tried to be dealt with in the definitions of post-humanity. The question of what post-humanity is not about is as significant as what it is about.

Most of the time, post-human is associated with both scientific and science-fictional medical and technological enhancements that invade the human body, physically and psychologically augmented human-machine hybrids, (voluntary) evolution, becoming cyborgs. However, there are also cultural and political conditions that have a role in the construction of post-human conditions and / or imaginations that are not and cannot be ignored.

In other words, the arguments about post-humanism envision both dystopic and utopic conditions for the future. According to the dystopic view humans will be displaced by intelligent machines. The utopic view, on the other hand, considers this machinization of human beings as liberation from the "humanly" boundaries which are

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[22] Thomas Lamarre, "The First Time as Farce: Digital Animation and the Repetition of Cinema," in *Cinema Anime*, ed. Steven T. Brown, (England: Palgrave Macmillan, 2006), 169.

mostly determined by the physical features of the flesh bodies. If these utopic and dystopic views about post-humanity are considered as the two ends of the "post-humanistic view continuum" the concerns in-between could said to be about both scientific and social consequences of post-humanism.

Evolution and / or mutation by means of biotechnology, human-machine hybridization, development of intelligent machines, domination of cyber-life, augmented human capacities are among some of the features that are analyzed under the post-humanist view. To be able to see the distinct points that are emphasized or attributed to the concept of "post-human" it can be useful to go over some definitions from diverse authors. It should also be noted that the included definitions are chosen accordingly for the purpose of including both the dystopic and the utopic views about post-humanity:

"(Posthumanism is) the belief in artificially enhanced evolution"

Tiziana Terranova in her article *Posthuman Unbounded: Artificial Evolution and high-tech Subcultures* defines posthumanism in the very first sentence of the article as "the belief in artificially enhanced evolution". In her analysis, she traces the scientific, science fictional, cultural and philosophical origins of post-humanity. She talks extensively about cyberpunk imagination and consider post-humans as the biologically altered, smart, and with unbelievable intellectual, physical and psychological ability. It is envisioned that cyborg like human-machine hybrids will be potentially immortal and without any constraints which are basically the result of having a flesh and bone body.

She mentions Extropians'[23] definition of "post-humans" as persons who have overcome the biological, neurological and psychological constraints evolved into humans.[24] According to Extropians, post-humans do not have to be fully machinized. They can be partly or mostly biological. This definition is also very similar to that of

[23] The Extropy Institute in California.

[24] Tiziana Terranova, "Posthuman Unbounded: Artificial Evolution and High-tech Subcultures," in *Future Natural: Nature, Science, Culture,* ed. George Robertson, Melinda Mash, Lisa Tickner et.al. (New York: Routlegde, 1996), 171.

Nick Bostrom who defines posthumans as beings with at least one post-human capacity.[25] It is also mentioned that "our" personalities are transferred into more "durable, modifiable, and faster and more powerful bodies and thinking hardware." [26]

Terranova considers the believers in post-humanity as people claiming that thanks to technology they can become whatever they would like to be. However, according to her, in this very utopic view of becoming post-human there stands the erasure of society and the "fragmented aggregate of individuals" will be left without historical and material limitations the idea of which makes the "rampant super-voluntarism" as the problem about post-humanism. She claims this pessimistic view about post-humanity is also the factor that distinguishes cyber punk fiction from the other views about post-humanity that envisions post-biological human beings as liberated individuals with extended "self"s.

In order to express this new, frightening, exciting, uncanny and/or promising transformation that is experienced by humans, the author uses the biological terms "mutation", "evolution" and "evolutionary mutation". Becoming post-human, on the other hand, is associated with "voluntary" and "individually planned" mutation which refers to the physical evolution that is beyond the boundaries of humanity.[27] This mutation involves hybridization of human beings with machines and technology's invasion of the human body and psyche.

It can be said that defining the mentioned mutation as both evolutionary and voluntary reflects the positive and negative feelings about becoming post-human. Its being voluntary and planned seem to be the factors that make the author's views of post-humanity very dystopian, because "mutation" brings to mind the act of deviating

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[25] Nick Bostrom, "Why I want to be a Post-human When I Grow Up?" in *Medical Enhancement and Posthumanity*, eds. Bert Gordjin, and Ruth Chadwick ((New York: Springer, 2008), 1.

[26] Tiziana Terranova, "Posthuman Unbounded: Artificial Evolution and High-tech Subcultures," in *Future Natural: Nature, Science, Culture*, ed. George Robertson, Melinda Mash, Lisa Tickner et.al. (New York: Routlegde,1996), 171.

[27] Tiziana Terranova, "Posthuman Unbounded: Artificial Evolution and High-tech Subcultures," in *Future Natural: Nature, Science, Culture,* ed. George Robertson, Melinda Mash, Lisa Tickner et.al. (New York: Routlegde, 1996), 172.

from what is defined as natural and departure from the parent type[28]. Besides, volunteering for such a transformation puts the responsibility upon human beings rather than an irregularity occurring in the nature or some divine power such as God. On the other hand, evolutionary side of the mutation of human beings into post-humans indicates that there are also some expected and/or visible developments that are brought by post-humanity.

"Post-humanity is our historical moment in which the organic and its others are crossing over into each other's domains."

Another argument that makes post-humanity move beyond the scientific inquiries and science-fiction is that it is considered to be one of the terms that is used to define "our global and cultural situation". [29] In the article *Biomorph: The Posthuman Thing*, Gray Kochhar-Lindgren defines post-humanity as:

> Our historical moment in which the organic and its others are crossing over into each other's domains. [30]

He explains the border crossing of the organic and its others with body's hybridization with different kinds of machines along with computers. [31] He also provides a reversed look at the machinization of the organic and draws attention to the question of "what happens when the machine comes closer to the human while human is forming a symbiosis with the machine and thus coming closer to the "thing"?".

In the article, after the distinction between the "thing" and the "person" is historicized, the discussion is moved to today's "mutating world". In Aristotle's definition of the thing, for example, the thing is considered as "an underlying substance

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[28]Definition of the word "mutation" as cites on the website: http://dictionary.reference.com/browse/mutation?qsrc=2889

[29] Gray Kochhar- Lindgren, "Biomorph: The Post-Human Thing," in *Jacking into the Matrix Franchise*, Matthew Kapell and William G. Doty (New York: Continuum, 2004), 144.

[30] Ibid., 144

[31] Ibid., 144

(ousia) modified by a variety of attributes"[32]. According to this definition, the essence of the thing is related to definition, the correct use of language and logic. The concepts of mind and body are not treated as separate entities, but as an organized thing which is the "human body". [33]

With Rene Descartes, the understanding of the body and mind relationship shifts and human beings are considered as both thinking and perceiving things and objects in the world, in other words as "things extended in space". However, he claims that there are different laws that apply to the body and the person.

During the industrial Revolution, on the other hand, thing becomes an object of mass production. Marx's idea of different metamorphosis of the labor whose final point is the machine, or in his own words, an automatic system of machinery [34] is interpreted as a context where humans and machines form a symbiotic relationship. By Rainer Rilke, this situation is interpreted as the loss of the thing to industrialization.

Finally, following Heidegger's emphasis on the issue of the sense of how all things come into existence, the author associates the thing, the world and "us" as follows:

> "In every-thing (or is it only handmade and simple things like a jug?) the earth and the sky, the gods and mortals come together. That is us. Things gather and that is what we call "world". A thing, whether "natural" or "artificial," shows us the world in which we live." [35]

It is stated that under the prevalence of technological worldview human beings are transformed into a thing that is not different from other things. The stable world of things is related to language which is regarded as a tool to mediate the world and

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[32] Ibid., 146

[33] Ibid., 146

[34] Gray Kochhar- Lindgren, "Biomorph: The Post-Human Thing," in *Jacking into the Matrix Franchise*, Matthew Kapell and William G. Doty (New York: Continuum, 2004), 147.

[35] Ibid.,149

produce it for human beings.[36] With the present technology, the "word-thing" is turned into a digitized thing. The world is converted into and represented in the computer code transferring both human beings and things into information. In this process the boundaries of human, machine and software worlds are claimed to be blurred.

The post-human is defined as the symbiosis formed between scientific rationality, technical interfaces between the organic and the inorganic along with the mythic imagination. It is foreseen that "we" will become a community of cyborgs and "we" are all claimed to be mutating in this "evolutionary space of conversion". [37] The rise of new methodologies such as cultural studies, media studies, feminist studies, myth studies, narratology and semiotics, is considered to be the new methods of understanding the way "our" individual and collective lives function in the mutating world that is under the influence of genetic and electronic innovations which again brings about the issue of the blurring boundaries of the body.

Forlini, relates disappearance and ambiguation of the body to its replacement with, in his own words, the machinic or other not-quite human variations which is the result of developments in science. Eventually, the traditional understanding of the human is challenged and another category that is named "abhuman" by Kelly Hurley is born.[38] Abhuman is in constant becoming of "other". According to Hurley, the prefix ab- expresses a movement away from something along with a loss. However, it is stated that a movement away from something brings movement towards another thing which is associated with a threat and a promise at the same time. Thus, it can be concluded that according to Forlini and Hurley, the "becoming" of the post-human implies the loss of the "human" which raises both utopian and dystopian expectations.

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[36] Ibid.,146.

[37] Ibid.,154.

[38] Stefania Forlini, "Machinic-Human Body and Charlotte Mew's Aesthetic of (Dis)Embodiment," in *Gothic Studies* 5, no:1 (2003), 114.

"The post-human is the biotechnologically mutated non-human."

Francis Fukuyama's ideas are very similar to those of Forlini and Hurley about the issue of post-human's becoming other:

"The post-human is the biotechnologically mutated non-human." [39]

This definition of Fukuyama clearly expresses that the technologically invaded bodies of post-humans are in fact "non-humans".

Naming the post-human as "abhuman" or "non-human" can be interpreted as still setting borders between "things", being able to distinguish between humans and nature, the blurring boundary of which is considered as the beginning of post-human era by Robert Pepperell:

"The post-human era begins in full when we no longer find it necessary or possible to distinguish between humans and nature"[40]

Both ideas of the human envision a boundary crossing between things and humans, however Pepperell's point of view do not draw definite boundaries of what is human and what is not.

"Post-humanism is a philosophical stance about what might be termed a "perpetual becoming".

Apart from the scientific and science fictional arguments, post-human condition is also discussed in terms of its cultural, social and political aspects. For instance, Carl Silvio in his article *Animated Bodies and Cybernetic Selves* consider human-machine hybrids of the animes and other science fiction works as tropes for collective fears, anxieties and expectations which makes the idea of post-human a way of reflecting on a cultural shift. This shift is claimed to involve much more than people's increasing

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[39] Robert Pepperell, "Posthumans and Extended Experience" in *Journal of Evolution and Technology* 14, no.1 (April 2005), 30.

[40] Robert Pepperell, *The Posthuman Condition: Consciousness Beyond the Brain*. (Bristol: Intellect Books, 2003).

engagement with information technology. It is also about the change in understanding of the "humanity" and "body"[41] which also brings the question of individual choice as human beings will be able to "virtually" decide about almost everything about themselves. The biological borders of the human body will be defeated or blurred which will or might bring more freedom of choice or threat of collapse of the set social and moral system. As it can also be seen in this last statement, for the moment the issue of border crossing, despite all its promises, creates anxiety which is proposed to be called a "postmodern anxiety" by Andy Miah:

> "Post-humanism is a philosophical stance about what might be termed a "perpetual becoming". Post-humanism is indicative of a struggle of perspectives, perhaps analogous to the struggle of humanity's shedding of its biological limitations. It exhibits moments of concern about the fragility of biological decision making, which might be more broadly conceived as a postmodern anxiety."[42]

The possibility of being able to make decisions about biological condition is considered very fragile and approached with anxiety. However, it is underlined at various points that post-humanity is not just related to the technological and medical change, but mainly to the change and the subject of that change. The bodily modifications, transformation and metamorphosis are evaluated along with their cultural meanings. It is claimed to be a shift from chance to choice which brings the ethical concerns along. Thus, the concept of transformation that is associated with post-humanity is not just about biological transformation.

This idea of post-humanity as a culturally constructed condition is also supported by Elaine Graham's claim that all forms of human and post-human are "representations" forged within cultural contexts.[43] She states that the "stories" of the shifting paradigms of humanity nature and technology are always culturally mediated

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[41] Carl Silvio, "Animated Bodies and Cybernetic Selves: The Animatrix and the Question of Posthumanity," in *Cinema Anime*, ed. Steven T. Brown, (England: Palgrave Macmillan, 2006), 117.

[42] Andy Miah, "Posthumanism: A Critical History," in Bert Gordjin and Ruth Chadwick *Medical Enhancements and Post-humanity* (New York, Routledge, 2007), 23.

[43] Elaine L. Graham, *Representations of the Post/human: Monsters, Aliens and Others in Popular Culture* (Rutgers University Press: New Jersey, 2002), 20.

and she tries to prove her point through the analysis of the films *eXistenZ*[44] and *The Matrix Triology.*[45] She associates the mentioned anxiety with the fear of decline of human uniqueness due to the technological changes. The erosion of corporeal boundaries, confusion of fact and fantasy, loss of control, which are the themes preferred to be analyzed in the film *eXistenZ* by the director Cronenberg, are acknowledged as symptoms of the anxiety. [46]

Latour's argument that the science and society mutually construct one another illustrated that although science is regarded as the study of nature whose objects are out of life and humanities is supposed to study the works of culture which are "fabricated products of society" and thus opposite of nature, there are some points that this contradiction cannot be observed. Because of science's power of transforming nature into culture, the species and states of being become hybrids and purity does no longer exist.[47] For instance, a mouse can become a commodity when it is made carry a carcinogenic gene to assist research in breast cancer. In such a case, it can be said that the boundaries of nature, science and business become blurred.[48] Bruno Latour perceives a kind of monstrosity in this (process of) hybridization which stands at the dystopian end of the continuum in the post-humanist view:

> "when we find ourselves invaded by frozen embryos, expert systems, digital machines, sensor-equipped robots, hybrid corn, data banks, psychotropic drugs, whales outfitted with radar sounding devices, gene synthesizers, audience analyzers, and so on, when our daily newspapers display all these monsters on page after page, and when none of these chimeras can be properly on the object side or on the subject side, or even in between, something has to be done..."

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[44] *Existenz,* DVD, directed by David Cornenberg (1999, Canada, Alliance Atlantis).

[45] *The Matrix,* DVD, directed by Andy and Larry Wachowski (1999, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

[46]Elaine L. Graham, *Representations of the Post/human: Monsters, Aliens and Others in Popular Culture* (Rutgers University Press: New Jersey, 2002), 21.

[47] Ibid., 33-34

[48] Bruno Latour, *We Have Never Been Modern* (Cambridge: Harvard University Press, 1993), 49.

As it becomes difficult to categorize, the hybrids are started to be classified as monsters which creates the feeling that something has to be done. Paul Virilio defines the hybridization of the body with technology via prosthetics or other medical interventions such as transplantation or implantation as the "pollution" of the body rather than augmentation of the physical and mental abilities of the body.[49] Once again nature is invaded by science and its order is disturbed.

Instead of "pollution", Graham uses the term "ontological hygiene" the continuance and preservation of which separates human from non-human, nature from culture and organism from machine. In this case the loss of ontological hygiene can be associated with Barbara Creed's explanation of the grotesque body which lacks boundaries and stability and becomes the body of the horror genre questioning what it means to be a human:

> "The image of the transforming body is central to the horror genre; Its main symbolic function is to challenge definitions of what it means to be human. The proper body of the symbolic does not metamorphose; it is recognizable, fixed, trustworthy. It is made in "God's image". [50]

Creed explains that it is the decaying, incomplete and deformed body which creates the horror and terror. Post-human anxiety seems to take the bodily disintegration into another and further level which is the invasion and finally erasure of the body which will be dealt with in other sections of this study.

"I shall define post-humanity as a being that has at least one post-human capacity"

In the article *Why I want to be a Post-human When I grow Up* Nick Bostrom considers post-humans as beings who have at least one of the capacities of health span, cognition and emotion that exceed that of human beings. Different than the other cited

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[49] Paul Virilio, *The Art of the Motor*, trans. J. Rose. (Minneapolis: University of Minnesota Press, 1995), as cited in Bjorn Nansen, "Machine Breaths: Assembling the Mechanical Ventilator Body" in *Transformations* 14 (March, 2007), *http://www.transformationsjournal.org/journal/issue_14/article_02.shtml*.

[50] Barbara Creed, "Horror and the Carnivalesque," in Leslie Devereaux and Roger Hillman, eds., *Fields of Vision: Essays in Film Studies, Visual Anthropology and Photography* (Los Angeles: University of California Press, 1995),136-137.

authors, he defines "us" in relation to post-humans and proposes two theses about the possibility for post-humanity to bring good to people:

1. Some possible post-human modes of being[51] would be very good.
2. It could be very good for us to become post-humans.[52]

The first thesis compares post-human modes of being to the human modes of being and proposes that some post-human modes of being will be very good for us, while some others might be terrible just like it is the case for human modes of being.

The second one, on the other hand, takes the recent condition of the human beings into consideration as well. It is proposed that experiencing the transformation and turning into post-humans can be good for "most current human beings".

These two theses suggest that post-human modes of being can bear some negativity, however, this fact does not or will not make post-humanity worse than human modes of being. Thus, it is affirmed that it is significant to work on and discover the possible goodness that will brought by post-human conditions.

Bostrom lists four levels of objections that stand up to the realization of these post-human modes of being:

0. It can't be done.
1. It is too difficult / costly.
2. It would be too bad for society.
3. Post-human lives would be worse than human lives.
4. We could not benefit.

The first two are concerned about the scientific and financial possibility of becoming post-humans. The second one is about the social consequences of turning humans into post-humans. Opposite to trans-humanists proposition that trans-humanist project is for the benefit of all human beings rather than just a elite group, it is

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[51] "Mode of being" is explained as a set of capacities and other general parameters of life by Nick Bostrom.

[52] Nick Bostrom, "Why I Want to be a Posthuman When I Grow Up?," Bert Gordjin and Ruth Chadwick *Medical Enhancements and Post-humanity* (New York, Routledge, 2007), 107-137.

expressed that having post-humans in society will create discrimination and inequalities, because people cannot be transformed into post-humans at the same time. Even if a complete post-human future will be the case, there will be a time when humans and post-humans co-exist or there is the possibility that some people will refuse to become post-humans even if they have the chances. This argument also reveals the fear that the existence of post-humans might be degrading for humans and thus "pose a threat to ordinary humans."[53]

These ideas are also very similar to the first of the four scenarios[54] of bio-political future considered possible by Richard Hayes. According to this scenario in 2021 there will not be any turning back. "Natural" will be replaced by "techno" which will be regarded as the feature of excellence. However, "techno" will be able to be reached just by elites who will constitute the hegemonic trans-humanist libertarian class of the future society.[55]

The third and the fourth are explained to be about the comparative value of human and post-human lives. The opponents of post-humanity foresee that post-human lives will not be loaded with the human values and ethical standing. In addition, it is feared that humans might be considered as inferior creatures that are more suitable for slavery. This might turn into a science-fictional war or mass destruction.[56]

At this point, it worth mentioning the second scenario of Richard Hayes[57] which presents an alternative vision to the value of post-human and human life described above. This second scenario which is called "One Family, One Future" envisions that women will die because of cloning experiments and rich people will try to get eggs

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[53] Nick Bostrom,"In Defense of Post-human Dignity," in *Bioethics* 19, no.3 (2007), 203-214.

[55] Richard Hayes, "Our Biopolitical Future: Four Scenarios," *World Watch Magazine* (March/April 2007).

[56] Nick Bostrom, *Transhumanism: The World's Most Dangerous Idea?*, 2004, www.nickbostrom.com. (accessed June 17, 2009).

[57] The third and dystopian scenario envisions the usage of technology by nations for gaining more dominance in the political arena while the fourth one talks about the foundation of legal institutions that support scientific research while at the same time try to protect the values of equality and social justice.

from Grade A women and sperm from genetically superior men which will be sold through internet. On the other hand, women from Ukraine and Romania will be paid very little for the use of their wombs. The disasters will not stop here. A Scottish gene therapy experiment will cause two dozen infants get incurable bone cancer. As a consequence, religious conservatives will raise their voices and start counter movements. A gifted German-Turkish author will write a book titled "Humanity or Trans-humanity?" which tries to offer a peaceful human future filled with love and which is in harmony with nature. What is different about this book is the fact that it embraces conservative Islamic, Christian, Jewish, Hindu, and Confucian social values to offer a universal human future.[58]

In this scenario, it is made very clear that the boundaries between nations and/or "races" are not blurred yet. No explanation is made about the choice of nations either. It is the Ukrainian and Romanian women who are abused. The disastrous experiment is conducted by the Scottish while the book that embraces the codes of many traditional religions is written by a German-Turkish author. Although the genes can be chosen from superior men and women or they can be modified, there are still nations and apparently there are also still privileged and non-privileged nations. While people of some nations are more under the threat of abuse the others are in the position of abuser.

It can be said that in this fictional world of Richard Hayes, the present struggles are seem to be moved to a technological level with no other significant ethical or cultural differences.

End of Human Nature, End of Liberal Democracy

Francis Fukuyama, on the other hand, considering trans-humanity as a threat to liberal democracies,[59] points to another dystopian future for humans that can be brought about by biotechnology and claims that trans-humanism is the world's most dangerous

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[58] Richard Hayes, "Our Biopolitical Future: Four Scenarios," *World Watch Magazine* (March/April 2007), 14.

[59] Andy Miah, "Posthumanism: A Critical History," in Bert Gordjin and Ruth Chadwick *Medical Enhancements and Post-humanity* (New York, Routledge, 2007), 4.

idea. He even says that "Transhumanists are just about the last group that I'd like to see live forever." [60]

He, as a bioconservatist, mostly focuses on the medical enhancements and interventions applied on the human body and fears that the human essence will be lost and the general conceptualization of the "human" will be disintegrated.

According to Fukuyama, The Factor X- the unique human essence which creates a fixed conceptualization of the human and makes it possible for all humans to be equal under law- is what makes the present political and social organization possible. However, when the "human nature" is intervened and the boundary between what is human and what is not is blurred, he fears that the political stability will be threatened:

> "Human nature shapes and constraints the possible kinds of political regimes, so a technology powerful enough to reshape what we are will have possibly malign consequences for liberal democracy and the nature of politics itself."[61]

It might be also significant to point out that Fukuyama considers liberal democracy as the final form of human government. He deems the end of Cold War and the universalization of the western liberal democracy as the end of history and the peak of humankind's ideological evolution.[62] According to him, the class issue in the West has been resolved thanks to liberalism.[63] He claims that the egalitarian society that has

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[60] Bostrom, Nick, "Transhumanism: The World's Most Dangerous Idea?," 2004. www.nickbostrom.com, 1.

[61] Franco Furger and Francis Fukuyama, "Beyond Bioethics: A Proposal for Modernizing the Regulation of Human Biotechnologies," in *Innovations: Technology, Governance, Globalization* 2, no.4, 117-127 (October, 2007) as cited in Andy Miah, "Posthumanism: A Critical History," in Bert Gordjin and Ruth Chadwick *Medical Enhancements and Post-humanity* (New York, Routledge, 2007), 4.

[62] Francis Fukuyama, *The End of History*, 1989 http://www.wesjones.com/eoh.html (accessed August 8, 2009).

[63] It should be noted that according to Fukuyama, the reason of "black poverty" is not a consequence of liberalism. It was caused by racism and slavery. Thus, he does not hold responsible liberalism for the present and growing gap between the rich and the poor people in the U.S.

been imagined by Marx has been achieved in modern America. Hence, it is argued that when the post-humans start to appear the established equality will be threatened.

In his 1989 article *The End of History* he cites Hegel and states that "all human behavior in the material world, and hence all human history, is rooted in a prior state of consciousness." He adds that this consciousness might manifest itself through religion, culture or moral habits without being explicit or conscious. It is claimed that in time this consciousness "creates the material world in its own image."[64] Thus, it can be said that when human beings are biologically altered this consciousness and history will be interrupted, because he regards post-humanity as the absence of humanity and post-humans as the replacements of human beings. He does not see post-humanity as a continuum of the present system or humanity, but rather as an artificial disruption and possible demolition of (moral) values, history, political and economic system.

In his articles such as *Why I want to be a Post-human When I grow Up* and *Transhumanism: The World's Most Dangerous Idea?* Bostrom provides explanations and opposes these ideas of Fukuyama.

To start with, he does not think that post-human lives will be more valuable than the human lives. The value of a certain mode of being is said to be context dependent which means that some values might be considered high in some contexts while in some others they might not:

> "It is possible for a mode of being to be instantiated in a range of different possible lives, and for some of these lives to be good and others to be bad. In such a case, how could one assign a value to the mode of being itself?" [65]

Based on this argument, he defines the "value" of a life in terms of the "well-being" of its owner. For instance, if a person is having a healthy, long and happy long life with friends and good mental state then it can be claimed to be "valuable" and there is no reason for post-humans to achieve this valuable mode of life.

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[64] Francis Fukuyama, *The End of History*, 1989 http://www.wesjones.com/eoh.html (accessed August 8, 2009).

[65] Nick Bostrom, "Why I want to be a Posthuman When I Grow Up?," in *Medical Enhancement and Posthumanity*, eds. Bert Gordjin and Ruth Chadwick (New York: Springer, 2008), 3.

The possible contradictions between humans and post-humans are treated as significant problems that should be dealt, however it is proposed that social remedies should be used instead of abolishing the trans-humanist project. It is also noted that there is always the risk of one group's considering the other inferior and apt for slavery. Laws of modern societies exist to serve to hinder such treatments. In the present society there are people with higher intelligence or physical capacities along with the ones with the ones with lower physical or mental capacities. Hence, Bostrom states, there is no reason for society to be fragmented and /or for humans to find themselves in the middle of a war or enslavement.

Dignity is considered to be another intrinsic feature of humans which cannot be possessed by post-humans. As it is already mentioned, the Factor X, according to Fukuyama, can only be possessed by human beings. Bostrom defines dignity as a moral status and as the quality of being worthy or honorable; worthiness, worth, nobleness, excellence[66] and defends that there is no reason for post-humans to not have dignity. Taking the dynamic nature of human beings into consideration, the constant change in life-styles, technological, social, scientific changes, constant flux that our genes go through, Bostrom declares that we are already post-humans for our ancestors.

When the transformation process into post-humans is considered in such a way, it just looks like to be natural continuum of the (history) of humanity which provides people with more chance for intervention in their own nature. Post-humanity looks like the extended and more advanced version of human desire to establish control over nature.

Another issue that should be underlined in line with Fukuyama's opposition is that transformation of human beings gradually into trans-humans and post-humans do not necessitate the erasure of values, memories or moral dignity, because post-humanity is not the absence of humanity. Bostrom explains that human gene pool is not stable anyway and genes create an extended phenotype which carry not only the information of our bodies but also the artifacts that institutions that function in our environment. Thus, it might be claimed that post-humans with their augmented capacities might

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[66] Nick Bostrom, "In Defense of Post-human Dignity," in *Bioethics* 19, no.3 (2007), 203-214.

accelerate this evolution while they also come up with deeper understanding of moral and social values.[67]

Aldous Huxley's science fiction novel *Brave New World*[68] is among the major examples of dystopian future that is feared for the humans who will be dehumanized because of excessive use of technology. Brave New Worlders live in a total caste system where people are raised according to their status. Each caste can have certain physical and intellectual capacity. Humans are raised listening to doctrines of Fordist religion while they are sleeping. They are made believe that their own caste is the best one. It can be said that they live in a total illusion created by the ten rulers of the Brave New World. Opponents of the post-humanity who fear that the social equilibrium will be damaged and the society will be corrupted show Huxley's dystopian world as an example.

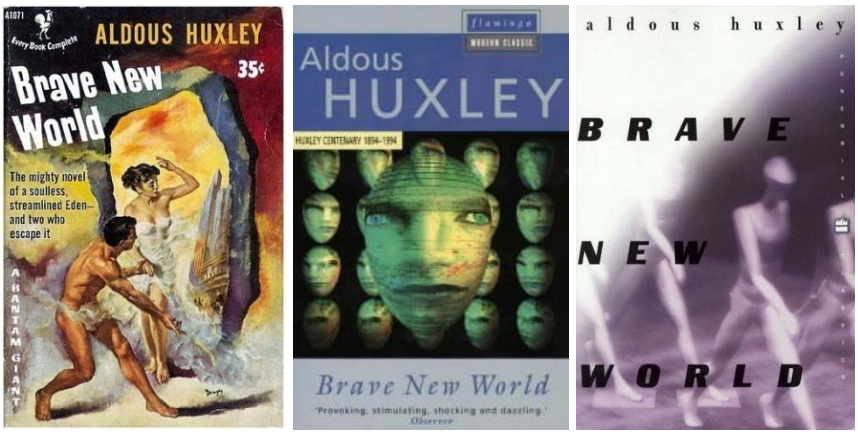

Figure 1: Different book covers designed for the book Brave New World. The first one represents the two protogonists of the story who can escape from their conditioned lives in the Brave New World. The other two focus on the identicality of the people of this world. It can also be noted that their sameness in terms of mind is represented through their bodies.

Bostrom's response to this dystopian view has its roots both in history and in the Brave New World. He underlines the fact that the inhabitants of the Brave New World are not post-humans. Their level of intelligence or other capacities are not superior to the present human beings. The usage of technology is also controlled by government,

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[67] Bostrom, Nick, "Transhumanism: The World's Most Dangerous Idea?," 2004. www.nickbostrom.com, (accessed August 8, 2009).

[68] Aldous Huxley, *Brave New World* (London: Chatto and Vindus, 1932).

people are not provided with the chance of deciding for themselves about how to make use of technology. Thus, their dehumanization is not the result of their immoral, wrong or excessive usage of technology.

In the articles *A History of Transhumanist Thought* and *In Defense of Post-human Dignity* the condition of the Brave New Worlders are compared to those created by government sponsored eugenics programs the most disastrous of which was conducted by Nazi Germany. In the 20th century these programs were applied in order to carry out the natural selection that was hindered by human civilization which turned into an action of "racial hygiene" and genocide. Bostrom draws a similarity between the applications of these eugenics programs and the conditioned lives of the Brave New Worlders in terms of the source of the decision: Eugenics is enforced by the governments and Brave New Worlders are governed by ten people who make all the decisions for them.

Based on these examples, Bostrom strongly defends the idea of letting the people decide about their own usage of the human enhancement technologies rather than imposing some regulations from the above. He also does not deny that technological developments can also pose threat to human civilization with the development of weapons for mass destruction or the abuse of biotechnology, however he proposes the idea that strict regulations should be and can be applied for the development and usage of weapons while the human enhancement technologies can be promoted.[69]

Technological singularity[70] which refers, in Bostrom's words, to a point where technological progress becomes so rapid that genuine super-intelligence is attained within a short time span[71], is another factor that increases the dystopian fears towards

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[69] Nick Bostrom,"In Defense of Post-Human Dignity," in *Bioethics* 19, .n.3 (2005), 202-214.

[70] According to the explanation in Extropians' FAQ section singularity is the time when technological development will be at its fastest. According to another view the idea of singularity is a technocalyptic dreaming, http://www.aleph.se/Trans/Global/Singularity/ (accessed June, 2009).

[71] Nick Bostrom, "When Machines Outsmart Humans," in *Futures* 35, no.7 (2000), 759-764.

the realization of a post-human future. I.J. Good explains that when human beings invent a super intelligent machine, that machine, as it will be ultra-intelligent, can create even better machines. In such a case, there will be an intelligence explosion and human intelligence will be transcended.[72]

When the development of computers are considered in terms of Moore's law which explains the rate at which the computer speed increases through history, it is revealed that the human-level computing power will be reached before 2050. If the rapid developments in nanotechnology and neuroscience continue, creating human level artificial intelligence will become possible which probably will lead to the creation of greater-than-human–level artificial intelligence.[73]

One of the probable consequences of existence of super-intelligent machines is predicted to be the transformation of machines from being mere tools into independent agents.[74] The existence of super intelligent machines brings along the fear of end of human era as Vernor Vinge also states in his article Technological Singularity that was published in 1993:

> "Within thirty years, we will have the technological means to create superhuman intelligence. Shortly after, the human era will be ended."[75]

According to Vinge, singularity will also mean the replacement of the old models with a new reality. This change will expand rapidly over human affairs and

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[72] Irving John Good, "Speculations Concerning the First Ultraintelligent Machine," in *Advances in Computers* **6**, edited by Franz L. Alt and Morris Rubinoff (MA: Academic Press, 1965), 31-88, http://www.aeiveos.com:8080/~bradbury/Authors/Computing/Good-IJ/SCtFUM.html (accessed July 2009).

[73] Nick Bostrom, "When Machines Outsmart Humans," in *Futures* 35, no.7 (2000), 759-764.

[74] Ibid.

[75] Vernor Vinge. The Coming Technological Singularity, 1993 http://www.accelerating.org/articles/comingtechsingularity.html (accessed July, 2009).

when it finally completely happens it may be considered as "a great surprise and a greater unknown" in Vinge's own words.[76]

As an alternative to the AI, artificial intelligence, Vinge proposes another system called IA which refers to intelligence amplification. IA, like AI, involves with improving intelligence, but in a different way. To reach IA certain strategies such as more human-computer interaction are advised to be applied. It is predicted that IA will bring a more natural kind of improvement of intelligence.[77]

However, as studies on AI will not be stopped, IA will not mean the extinction of or nonexistence of super intelligent machines that will not need humans for the re-production of artificial intelligence. Thus the application of IA will not stop the creation of machines with general-purpose intelligence that goes beyond being just tools or programs set to solve certain kinds of problems. Taking this possibility into consideration Nick Bostrom claims that in this century humanity will face the consequences of artificial intellects in almost all the social, political, economic, commercial, technological, scientific and environmental issues.[78]

Apart from the dystopic fears of replacement of human race with machines, lowering of humans position in society, disintegration of society because of the existence of post-humans or artificially enhanced or intelligenced machines, destruction of political stability, there is also another concern regarding the studies done in the post-human area which is included in Nick Bostrom's analysis: "hubris".

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[76] It might be notable that the same improvments that are feared can also be the tools of preserving the existing models, values, memories, history or social setup as it has become in the very recent example of Virtual Museum of Iraq which is the virtual twin of the Museum of Iraq which was partially destroyed by US invasion. To see the museum please follow the link: http://www.virtualmuseumiraq.cnr.it/homeENG.htm.

[77] Vernor Vinge. The Coming Technological Singularity, 1993 http://www.accelerating.org/articles/comingtechsingularity.html (accessed July, 2009).

[78] Nick Bostrom, "When Machines Outsmart Humans," in *Futures* 35, no.7 (2000), 759-764.

Hubris in Greek tragedy refers to "excessive pride or presumption towards the gods, leading to nemesis."[79] It is again the fear that engagement with "off-limits" which will bring along disastrous consequences, such as the destruction or enslavement of people by their own creations. However, this time it also involves the fear from the god.

It can be said that just like the desire for immortality or long life, hubris is also as old as the human race. There are examples of it in different religions and cultures. In those narratives human race is punished for being too proud of their own creations and deny or forget the existence of a divine creator. In the end they are defeated both by their pride and technology.

For instance, according to Quran, the people of Ad tribe which was located at the peninsula of Arabia were very developed in terms of technology. They were very good at farming and they had houses built in high mountains. Although the geographical circumstances were not good they achieved to create a civilization and prosper. They got really proud of their achievements. The society was leaded by a few rich people and they were not good to other people. They forgot the existence of a creator and the God sent them the prophet Hud who tried to restore their faith. However, they did not believe in him and they were punished by a huge storm as a consequence of which the whole civilization collapsed.[80]

Elaine L. Graham, on the other hand, explains the fear that originates from religious beliefs not in terms of pride but in terms of the fear that originated from seeing a "living thing that is animated not by divine ordinance but by human artifice."[81] She talks about the Golem [82] legends of Jewish folklore which tells about human figures

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[79] Oxford Dictionary, 10th edition.

[80] The details and Turkish explanations are taken from the website: http://hubeyb33.blogcu.com/ad-kavmi-ve-hz-hud_26544791.html.

[81] Elaine L. Graham, *Representations of the Post/human: Monsters, Aliens and Others in Popular Culture* (Rutgers University Press: New Jersey, 2002), 107.

[82] Golem refers to the clay figure that is brought to life by magic. It also means an automaton or robot. In some versions the golem gets out of control and kills his creator which is a Rabbi and in some others it is killed and never re-animated again by the creator. This information is cited from Gershom Scholem's "The Idea of the Golem" in

made out of clay and which stand for low intelligent automatons that protects his master and do whatever he is told. According to Graham, golems are monster-ized because of the recent developments in science that are expected to make it possible for humans to create life. Golems are considered to be the threshold of life and thus symbols of human desire to surpass or imitate divine creation.

It is also possible to see similar discussions of religion and technology in Turkish personal and news blogs too. For instance, in one blog the posted article is about a system that is built by Uwe Aickelin and his team in order to protect computers from virus and hackers.[83] It is explained that the creation of a lot of technological products involves imitating the systems that exist in nature. It is underlined that the mentioned creator team was inspired by human immune system and they were successful because they imitated the nature which is being a creation of God, perfect. Thus, it can be inferred that human beings cannot give life or create something without models, out of nothing. All of their products are expected to be imitations of God's creations.

In another very recent news article posted in April 2009, the attention is tried to be drawn to the new laws in religion that are called for by technological developments.[84] According to this article in India a fatwa was issued about cell phone usage. According to this fatwa it is okay to listen to recorded prayers by means of a cell phone but it is forbidden to set up prayers as cell phone melodies. The article is concluded by underlining that both religion and technology are parts of human life, they are affected and shaped by each other.

Thus, it can be concluded that although the denial of hubris is considered to be required by trans-humanists, religion and technology are influenced by each other. The personal choice in becoming trans-humans which is emphasized over and over again in

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On the Kabbalah and Its Symbolism, 1965 and Hillel J. Kieval's *Pursuing The Golem of Prague: Jewinsh Culture and Invention of a Tradition*, 1997.

[83] The, Islam ve Insan Blog. http://www.frmtr.com/islam-ve-insan/758298-teknoloji-ve-din.html (accessed June, 2009).

[84] The, Milliyet Blog. http://blog.milliyet.com.tr/Blog.aspx?BlogNo=174797 (accessed June 2009).

Bostrom's articles may be considered in terms of religion as well. Religion might become one of the factors that can have a determinant effect on humans' personal and free choices of transforming post-humans. In this case, free will will have to be analyzed in relation to other elements of significance in human life.

Up to this point, all the presented arguments in regard to both dystopian and utopian views of post-humanity have been concerned with biological and/or technological enhancements of human capacities and ethical, political and cultural issues that are possible to be brought about.

It should also be noted that most of the anxiety, fear and / or hope originate from the anxiety, fear and / or hope of the transformation of the body through medication, genetic modification or prosthesis. As body is considered to be the first factor for defining humanity the changes imposed on it become the center of concern in the post-human view. It is both feared and hoped that the metamorphosis of the body will lead to changes into feeling of embodiment and embodied interactions with the environment that will be felt in many areas of life as exemplified in the utopian and dystopian views on post-humanity.

In the following section, post-humanism's definition and position in relation to information is focused on without ignoring the transformational aspects.

1.3: DIS/EMBODIMENT AND INTELLIGENT MACHINES AS PROSTHESIS

Katherine Hayles, thinking that post-humanity means much more than having prosthetics integrated into the body, takes the post-humanistic arguments to another level which is the comparison of human beings to information processing machines, especially to intelligent computers.[85]

In her analysis of the post-human the concept of body and mind duality is replaced with the idea of separation of information and material. It is claimed that the material world is the container of information, however post-human remains "distinct"

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[85] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 246.

from that information. Thus there is a gap between information and materiality which makes the human self conceived as "informational pattern that can be embodied in various forms." [86]

Following the information and material duality her arguments focus more on the computer-human relationship rather than any other machine. She defines four features of post-human view as:

- Privileging informational pattern over material instantiation;
- considering consciousness as an evolutionary upstart trying to claim that it is the whole show when actually it is only a minor side show;
- thinking the body as the original prosthesis we all learn to manipulate;
- configuring human being so that it can be seamlessly articulated with intelligent machines[87]

In addition to these four features, she also states that in the post-human there are no essential differences between bodily existence and computer simulation; however, also one does not have to be a literal cyborg in order to be a post-human either. It is underlined that human and post-human are the constructions that are the consequences of different configurations of embodiment, technology and culture.[88] The tradition of liberal humanism is the reference point for the "human" while post-humanity occurs with the transition from possessive individualism to computation. Human beings are started to be mentioned in relation with intelligent machines.[89] Thus it is human's relationship to technology that constructs the post-human.

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[86] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999) as cited in Carl Silvio, "Animated Bodies and Cybernetic Selves: The Animatrix and the Question of Posthumanity," in *Cinema Anime,* ed. Steven T. Brown, (England: Palgrave Macmillan, 2006), 115.

[87] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 3.

[88] Ibid., 33.

[89] Ibid., 34.

To illustrate this, the shift from the-man-as-a- tool-user to the-man-as-a-tool-maker is explained. Using tools was not enough to indicate the man's unique nature as animals were also using tools, thus the focus shifted to tool making. Following Kenneth P. Oakley's [90] idea that employment of tools might be humans' biological characteristic and tools are "detachable extensions of the forelimb", Hayles draws attention to the fact that tools do not have to be always mechanical as in Oakley's example, and they can also be informational going on the head, not necessarily with the hand.[91] When the tool becomes prosthesis, it points to human's becoming post-human as it shows the symbiosis of technology and human.

In the light of these arguments, it can be concluded that the idea of prosthesis can be analyzed in two ways: having artificial body parts which makes human beings closer to transforming into a cyborg, and J.C.R. Licklider's idea of computer (or visual technologies) as prosthesis of mind. The first one, in addition to the prosthetic legs, arms etc., includes enhancement of the body from the inside such as the aforementioned implantation or having artificial organs. For the second one, on the other hand, no physical contact with the "tool" is required and computer based modern visual technologies are the basis of this kind of "cognitive prosthesis". [92]

According to Elaine L. Graham, prosthesis such as implants or artificial body parts can be considered as *incorporated* body parts which lead to end of skin's being a boundary for the soul, the self and life.[93]Immersive "nature" of the digital worlds on the other hand, is discussed not in relation to its being prosthesis to the body or mind like a tool, but is considered as a total environment where the unitary self can become

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[90] Kenneth Oakley, *Man the Tool-Maker* (Chicago: University of Chicago Press, 1949).

[91] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 34.

[92] Lev Manovich, "Visual Technologies as Cognitive Prostheses: A Short History of the Externalization of the Mind," in *The Prosthetic Impulse: From a Posthuman Present to a Biocultural Future*, edited by Marquard Smith and Joanne Morra (Massachusetts: The MIT Press, 2006), 203-219.

[93] Elaine L. Graham, *Representations of the Post/human: Monsters, Aliens and Others in Popular Culture* (Rutgers University Press: New Jersey, 2002), 4.

multiple selves through the fictive identity constructed in the virtual environment (of chat-room, multi-user domain or avatars).

If this argument is re-considered in terms of Hayles' claim that there is no essential difference between bodily existence and computer simulation and idea that "body and mind duality" is replaced by separation of information and material, the issue of embodiment gains significance: Will the machines stay as cognitive prosthesis that augment and expand our understanding and experiencing of the world and / or lead to the point where human beings will be totally freed from their flesh and bone bodies (which would also mean immortality) ?

To begin with, it should be noted that Hayles' analysis of the post-human focuses more on the "emergence of post-human as an informational-material entity".[94] In opposition to Fukuyama, Hayles considers post-humanity not as an end to liberal humanism but as a continuation of it. It is explained that in the liberal tradition the body is regarded as an object to control[95] rather than an intrinsic part of the self. In this respect, post-human body which is defined as "data made flesh" in William Gibson's *Neuromancer* seems to "construct embodiment as the instantiation of thought/information".[96]

Information is explained in terms of pattern and randomness rather than absence and presence. Theoretically, information is different from the markers that embody it[97], thus it is a pattern not a presence. In this case non-information is considered to be the

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[94] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 11.

[95] To prove this point, anorexia is analyzed as a fight for self-control and escape from slavery for food, trial for self-possession and independent of bodily desires.

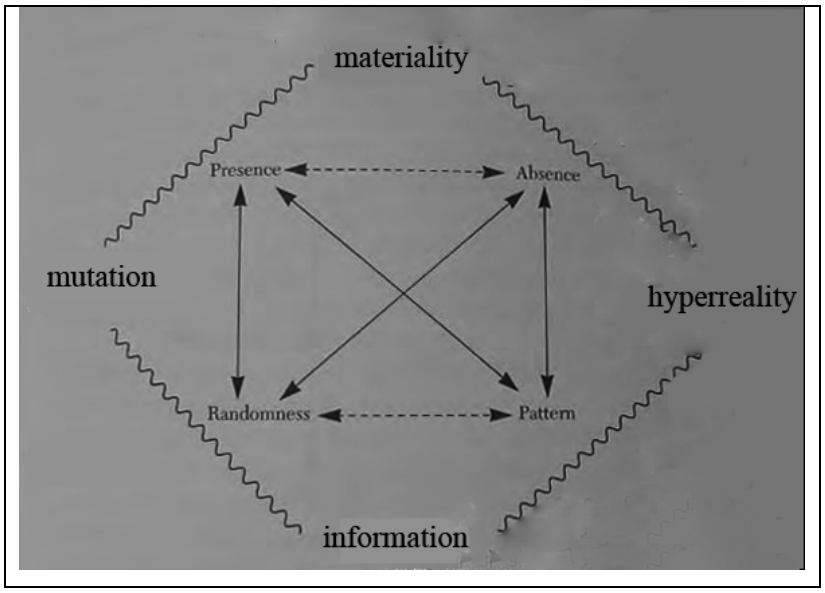
[96] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 5.

[97] This situtaion is explained in terms of the distinction made between the message and the signal. It is claimed that it is not the message that is sent but the signal. Message gains material form when it is encoded in a signal for transmission through a medium, for example when ink is printed on paper. (This information can be found in Hayles, Katherine. How We Became Posthuman, p. 18.

absence of pattern which is randomness.[98] When this issue of pattern and randomness is carried to the virtual reality, it seems more real and powerful than presence and absence, because it constructs an immateriality:

> "Patterns tend to overwhelm presence, leading to a construction of immateriality that depends not on spirituality or even consciousness, but only on information."[99]

To make her point about the formation and understanding of the post-human more clear Hayles proposes a semiotic square that involves and shows the relation between presence/absence and pattern/randomness along with their interplay with each other for the purpose of forming materiality, hyper reality, information and mutation. (Please see the figure below)[100]



According to this figure, the interaction that occurs between presence and randomness leads to mutation:

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[98] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 25.

[99] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 35.

[100] This figure shows that materiliaty emerges from the interplay between absence and presence. The interaction between absence and pattern leads to the emergence of hyper-realitywhile the interplay between presence and randomness results in mutation.

> "When randomness erupts into the material world, mutation achieves its potency as a social and cultural manifestation of the post-human."[101]

Randomness and mutation are also the indications of the existence of a pattern. With mutation the existing pattern seem to move in to a new direction. In a way, it also proves that randomness and pattern, presence and absence are not completely independent from each other. The change or transformation in one of them affects the other one(s).

Hayles, analyzes these interactions between randomness and pattern and absence through texts and films among which there are William Gibson's novel *Neuromancer* and the film *Existenz* which present situations of jacking into a computer.

Before the analysis of the virtual reality or computer games, she starts with the comparison of writing a text with a type-writer and with a computer. She underlines computer's restoring and presenting a word as an image. The text produced with a computer is considered as a visual display which provides a lot of possibilities for manipulation rather than a material object. In such a case, the author states, presence and absence seem irrelevant while pattern and randomness become more real and powerful.[102]

When, on the other hand, this argument is re-considered in terms of cyber-space and the conditions it represents for users (and also for their bodies) pattern is interpreted as "reality" while presence is regarded as an optical illusion:

> "Existing in the non-material space of computer simulation, cyberspace defines a regime of representation within which pattern is the essential reality, presence an optical illusion."[103]

In addition, as it is also depicted in various novels and films such as *Neuromancer*, the animated film *Ghost in the Shell*[104] by Mamoru Oshii and anime serial *Serial*

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[101] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 249.

[102] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 26.

[103] Ibid., p.36.

Experiments Lain[105] by Ryutaro Nakamura subjectivity and self can also be transferred into pattern which will make it possible for people to exist in cyberspace as long as the pattern endures. This would mean kind of an immortality. As it is the case in Ghost in the Shell, the body would serve just like a shell to preserve the soul or spirit whenever it is out of the cyberspace. Thus, the ultimate dream of getting over the bodily boundaries will be realized.

However, what is crucial in this scenario is the possibility and also consequences of disembodiment, separation of body and mind in the Cartesian sense and / or disintegration of the interactive nature of pattern, randomness, absence and presence. Will it become possible for humans to download themselves into cyberspace or copy and save their minds? Even if it becomes possible for human beings to exist as "pattern" or "mind" will the experience they will have be the same or greater than the embodied one?

Hayles' answer to the second question is "no", because for her literary "corpus" is both a body and a message as it is a physical object that also provides a space for representation. For this reason, it is impossible for books and humans not to lose anything when / if they become informational patterns:

> "Literary corpus is at once a physical object and a space of representation, a body and a message. Because they have bodies, books and humans have something to lose if they are regarded as solely as informational patterns, namely the resistant materiality that has traditionally marked the durable inscription of books no less than it has marked our experiences of living as embodied creatures." [106]

Here, Hayles explains her opinion by means of setting a connection between the textual bodies and "the embodied readers who produce and are produced by those texts

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[104] *Ghost in the Shell I & II*, DVD, directed by Mamoru Oshii (1996, North America, Australia and UK, Manga Entertainment).

[105] *Serial Experiments Lain*, DVD, directed by Ryutaro Nakamura (1998, Tokyo, TV Tokyo).

[106] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 29.

and technologies".[107] She claims that the changes in the way bodies are represented in the texts are related closely to the changes that textual bodies undergo. Hence, it can be concluded that information technologies are influential in the construction of human bodies and they affect and are affected and accompanied by biological, social, cultural and linguistic changes.[108] [109]

Hayles' and many other researchers' answer to the first question on the other hand, is again "no". As it has already been mentioned Hayles considers post-humanity as continuum of liberal humanism with the features of "autonomy, free will, rationality, individual agency, and the identification of consciousness as the seat of identity"[110]. For post-human too agency still exists, but with a significant difference: post-human is envisioned with a distributed cognition that involves both the body and the environment:[111]

> "…embodied experience comes not only from the complex interplay between brain and viscera, but also from the constant engagement of our embodied interactions with the environment."[112]

Like body, the ideas about embodiment, such as the body and mind dualism are also explained to be constructed by "cultural formations and the beliefs, observations, and experiences that count as empirical evidence in a given society".[113] Thus, ideas

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[107] Ibid., 29.

[108] Ibid., 29.

[109] Donna Haraway and Katherine Hayles use the term "informatics" to refer to this explained netweork of relations.

[110] Katherine N. Hayles, "Flesh and Metal: Reconfiguring the Mindbody in Virtual Environments," in *Configurations: A Journal of Literature, Science and Technology* 10:2, special issue (2005), 318.

[111] Ibid., 298.

[112] Ibid., 298.

[113] Ibid.,298.

about body and embodiment emerge from a constant flux that is generated by an interaction between culture and technology.[114]

Edwin Hutchins' study on navigational systems of oceangoing ships is one of the most cited examples as a proof of distributed cognition. In his study, Hutchins finds out that both human and non-human actors and their interaction with environment are involved in the detection and navigation of the ship.[115] Claiming that environment has a great impact on cognition, Hutchins states that:

> "Modern humans are capable of more sophisticated cognition than cavemen not because moderns are smarter, but because they have constructed smarter environments in which to work."[116]

Andy Clark's analysis of body and cognition, on the other hand, presents a continuum that starts with what he calls "isolationism" on the one end, and post-Cartesian agent on the other. Isolationism is the view that considers body just "an organ for receiving inputs and affecting outputs (actions)".[117] Thus the world is the provider of the inputs and it is the place that is affected by the outputs. Post-Cartesian agent on the other hand, is defined as the most radical anti-isolationist view which denies "any cognitively important distinctions between inner and outer processes, between perception, cognition, and action or between mind, body and world".[118]

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[114] However, body is considered to be more culturally constructed as embodiment involves the interaction between conscious mind and evolving physiological structures. Katherine Hayles insists that although the experience of embodiment might be different for different people, body and embodiment always interact with each other.

[115] Edwin Hutchins, *Cognition in the Wild* (MA: MIT Press, 1995) as cited in Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 288-290.

[116] Ibid., 289.

[117] Andy Clark, *Embodiment and the Philosophy of Mind,* 1998, http://www.philosophy.ed.ac.uk/people/clark/pubs/embmnd.pdf.

[118] Ibid., 4.

Clark, considers post-Cartesian vision unconvincing and proposes, in his own words, a weaker anti-isolationist vision that embraces the role of interactivity between internal world and outer world in cognition.[119]

The model proposed by George Lakoff and Mark Johnson is another one that is closed to the anti-isolationist vision. They deny both Cartesian dualistic person and and firmly defends the idea that reason is embodied:

> "Reason is not, in any way, a transcendent feature of the universe or of disembodied mind. Instead, it is shaped crucially by the peculiarities of our human bodies, by the remarkable details of the neural structure of our brains, and by the specifics of our everyday functioning in the world."[120]

It can be also be inferred that the authors support the idea that the separation of the body and mind is a culturally constructed phenomenon. They claim that empirical studies on the issue will force the Western culture change its assumption of that the mind is disembodied.

Another point that is focused on by George Lakoff and Mark Johnson is the probability that the empirical findings on the embodiment of the mind will change human beings' understandings of themselves.[121] Hayles, on the other hand points out the possibility that embodiment might be experienced differently by different people.[122]

Tom Ziemke asks the same question in a different way:

"What kind of a body (if any) is required for embodied cognition?"[123]

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[119] Andy Clark, *Embodiment and the Philosophy of Mind*, 1998, http://www.philosophy.ed.ac.uk/people/clark/pubs/embmnd.pdf, 29.

[120] George Lakoff and Mark Johnson, *Philosophy in the Flesh: The Embodied Mind and Its Challange to Western Thought* (New York: Basic Books, 1999), 2.

[121] Ibid., p.1.

[122] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999).

[123] Tom Ziemke, "What is that Thing Called Embodiment?" (paper presented in the 25th annual meeting of the Cognitive Science Society Lawrence Erlbaum, 2003), 1305.

And he defines six different notions of embodiment which are embodiment as structural coupling[124], historical embodiment, physical embodiment[125], organismoid embodiment, organismic embodiment[126], and social embodiment.[127][128] For the purpose of this study only the notions of historical and organismoid embodiment will be reviewed in further detail.

The notion of historical embodiment argues that our knowledge depends not only on our relationship to and interaction with environment but also to the social history which is considered to be inseparable from our embodiment. A system's being embodied is related to its "gaining competence within the environment in which it has been developed."[129]

Organismoid embodiment addresses the probability that certain types of organism like cognition might be existent just for organism-like bodies. However, it does not mean that artificial organisms are excluded. It is argued that both living and artificial organisms such as humanoid robots might have physical embodiment.[130]

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[124] This view argues that for organisms to be able to become autonomous agents, they have to be structurally coupled to their environment. It is argued that software systems without body can be intelligent.

[125] Physical embodiment envisions that physical instantiation is required for embodied systems. It is claimed that embodied systems should be interacting with the environment not just through physical forces but also through sensors and motors.

[126] This kind of embodiment considers that not only physical bodies but also organism-like bodies can have cognition. However, a distinction is drawn between living autonomous organisms and man-made artifical machines. It is argued that machines act according to plan while living organisms act the plan.

[127] Social embodiment questions the role of embodiment in social relations. The gestures, postures, facial expressions are considered to be a part of social interaction and crucial in social information processing. However, the question of what kind of body is required for what kind of embodiment is not addressed in this notion.

[128] Ziemke, "What is that Thing Called Embodiment?" (paper presented in the 25th annual meeting of the Cognitive Science Society Lawrence Erlbaum, 2003), 1306-1309.

[129] Ibid., 1307.

[130] Ibid, 1307.

All these notions of embodiment support Hayles' and Andy Clark's idea that mind cannot be treated as something that might be completely separated from the body and turn into pure, downloadable information. It can be said that both Hayles' and Robert Pepperell's[131] construction of the post-human as an extended form of experience is based on these arguments of the impossibility of separating human essence from its material form.

When this idea of extended human experience is considered in terms of the virtual world on the other hand, in Hayles words, the fear of "bodiless exultation of cyberspace" is replaced by the expended human functionality. Referring to afore mentioned model of Hutchins' she explains that:

> "In this model, it is not a question of leaving the body behind but rather of extending embodied awareness in highly specific, local and material ways that would be impossible without electronic prosthesis."[132]

Similarly, Pepperell also argues that "real" posthuman is potentially boundless in terms of experience, s/he is not an "abstract flow of symbolic information".[133] He explains his point in terms of extension of the mind which refers to the idea that mind extends out, into the world rather than being prisoned in the brain. It is also argued that external objects do not only have role in the construction of our beliefs but they also become parts of those beliefs.[134]

Pepperell puts across his argument that supports the externalist views of Clark and Chalmers through the examples of a coin and reading an article of his. He considers the article he has produced as thoughts that exist in the minds of the audience, thus it can be

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[131] Robert Pepperell, "Posthuman as Extended Experience," in *Istitute for Ethics and Emerging Technologies* 14 (April 2005).

[132] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 291.

[133] Robert Pepperell, "Posthuman as Extended Experience," in *Istitute for Ethics and Emerging Technologies* 14 (April 2005), 31.

[134] Andy Clark and Chalmers J. Chalmers, "The Extended Mind," in *Analysis* 58, 1998, http://consc.net/papers/extended.html (accessed June 2009).

said that his own mind extends into the world as a printed text and also into the readers' minds via the medium of the text.

The coin, on the other hand, gains its extensiveness from its being a part of both cultural milieu and financial system. Its value, for example, is different than its intrinsic value and it is gained from the financial system. The emblems and symbols, on the other hand, refer to a historical and cultural background. Thus, it can be concluded the boundaries of objects are those that are only imposed on them; otherwise they do not really have boundaries.

1.4: CONCLUSION

It can be claimed that in all these examples, human beings are considered apart from neither culture nor nature. All technology that is produced and used by human beings in or on their bodies is regarded as means of extending the human experience. Human mind cannot be considered as separated from the historical, cultural and environmental contexts even in cyberspace.

In the light of these arguments, the following questions are tried to be addressed in the following chapter:

- How can we place animation in the arguments of dis/embodiment and bodily metamorphosis which is one of the main concerns and fascination of the post-humanistic views?
- Can animation be considered as a means of creating extended experience?
- How can the fears about the end and / or "disembodiment" of cinema be contextualized in terms of the post-humanistic arguments?
- Is animation technology just prosthesis to cinema or is it more? How can we consider the animated bodies in terms of embodiment of the post-human?

In the following chapter answers for these questions are looked for by means of a comparative analysis of the Matrix Trilogy[135] and the Animatrix[136] which can be

[135] *The Matrix*, DVD, directed by Andy and Larry Wachowski (1999, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

considered as the animated version of the Matrix. Instead of continuing directly with the discussions of the questions above a brief introductory section about animation and animated bodies is provided.

The Matrix Reloaded, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).
The Matrix Revolutions, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

[136] The Animatrix, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

CHAPTER II: ANIMATION & METAMORPHOSIS & ANIMATED BODIES

2.1: ON DEFINITIONS OF ANIMATION:

As Paul Wells cites in his book *Understanding Animation,* there are diverse ideas on the definition of animation and what it is actually about. "To animate", and all the related words are actually derived from the latin word "animare" which means to "to give life to". When this word is considered in terms of animated films, it can be inferred that animated films are those that are made frame-by-frame by hand as a result of which illusion of movement is created. Although this definition comprises conventional [137]cel, hand-drawn and [138]model animation, it fails to explain other forms of animations such as computer generated ones[139] . Thus, it can be useful to go over a few more ideas on the definition of animation:

"Animation is not the art of drawings that move, but rather the art of movements that are drawn. What happens between each frame is more important than what happens on each frame."

"To animate is to give life and soul to a design, not through the copying but through the transformation of reality."

The first definition is quoted from [140]Norman Mclaren. His definition is focused not on what we see on the screen after the film is finished but on the process the drawing, model, clay and so on go through before they are filmed. The second definition, on the other hand, belongs to animators of the Zagreb School of former

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[137] "Cel" is the short form of "celluloid". Cel animation is hand-drawn animation on celluloid.

[138] Model animation includes animations that are done with real models such as claymation or puppet animation.

[139] Paul Wells, *Understanding Animation* (New York : Routledge, 1998), 10-17.

[140] Norman Mclaren is a Canadian animator.

Yugoslavia who emphasize the creative aspect of animation and oppose the idea that animation should imitate live-action films and thus should try to reach realism. Zagreb School animators claim that animation is concerned not with how things look, but what they mean.[141] Those animators mostly deal with surrealist forms of animation.

However, as Philip Kelly Denslow notes in his article *What Is Animation and Who Needs to Know?* all definitions of animation are challenged by the changing technology. After presenting a discussion of the questions that the intervention of computer technology brings into his mind such as the new ways of making frames move, the time a film takes to be created and new electronic models or puppets that are used in animation and the possible shifts and confusion that they might cause in the definition of animation, he concludes that animation is the desire to make "real" that which exists in the imagination.[142]

Considering the technological developments in the animation software, Paul Wells makes a claim in favor of animation:

> "Each new form of animation suggested another 'modernity', aesthetically and socio-culturally progressive."[143]

In the framework of this point of view animation is considered to be evolving all the time while being affected not only by technology but also by cultural changes. According to Paul Wells, animation's being under the influence of software developments also makes it open to experimentation in terms of form and language. He claims that unlike live-action cinema, animation has an unlimited capacity for

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[141] Paul Wells, *Understanding Animation* (New York : Routledge,1998), 10.

[142] Philip Kelley Denslow, "What is Animation and who needs to know?," in *A Reader in Animation Studies*, edited by Jayne Pilling (Sydney: John Libbey and Company Pty Ltd, 1997), 1-4.

[143] Ibid., p.30.

experimentation and innovation.[144] Adoption of new technologies in cinema, on the other hand, is considered just as a way of enrichment of cinema as a "spectacle".

Another argument which is very much related to this very last argument, questions whether animation is a new, distinct and separate style and medium or it is just the repetition of the old and just prosthesis to live-action (for example in terms of enhancing the opportunities for special effects)?

2.2: ANIMATION AS PROSTHESIS?

Thomas Lamarre's explanations about animation support the latter claim cover both animation's significance as a new media form and the way it influences cinema. Instead of considering new animation forms necessarily as progression or innovation, he also tries to acknowledge and address the possibility of repetition of old media in the new. He explains that the existence of new media is in a way indication of the "historical closure of cinema"[145], its completion and destruction at the same time. According to him, this "tragedy" of cinema might be its falling into systematization or its becoming new media. Thus, either an end or a transformation into some other form which is again can be regarded as an ending – mostly in a progressive sense that is brought by technology- is foreseen for cinema.

Animation's repetition of cinema on the other hand, is found uncanny or annoying, because animation is considered to be a form that is closer to comedy. On the other hand, replacement or hybridization of one animation form by another one is regarded as quite possible. For instance, it is explained that cel animation's repetition of

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[144] It should be noted that when the distinction between orthodox animation and experimental animation that is defined by Paul Wells in his book *Understanding Animation* is considered it is also possible to claim that animation has th epotential both for imitating cinema, cinematic style, language and narration and experimentation.

[145] Thomas Lamarre, "The First Time as Farce: Digital Animation and the Repetition of Cinema", in *Cinema Anime*, edited by Steven T. Brown (England: Palgrave Macmillan, 2006), 161-188

cinema is displaced by digital animation as a result of which cinema's potency has become visible.[146]

It can be said that, in this analysis animation is not considered as a separate individual form but rather a repetition and thus inferior form of representation which is better in conveying majorly humor. Furthermore, it can also be inferred that each development in the animation technology is trying to get animation closer to cinema rather than bringing an innovation within the animation medium in terms of style or technique.

In addition, in Lamarre's analysis of the animated form of *The Metropolis*[147] hybridization of new animation forms and technologies is claimed to serve just for lessening the problems that occur in colorization of the layers rather than being considered as a matter of style, narration or content. In other words, animation is considered as a way of redemption rather than a separate style or genre. Although this might hold true for this particular film, it does not seem quite right to generalize it to the other hybrid forms and ignore the aesthetic, cultural, emotional and narrational differences that might occur as a result of hybridization.

Steve Reinke considers cinema in three phases which brings a different perspective to the idea of redemption presented above: early cinema, cinema and the digital cinema. His review of these three stages is based on Manovich's "myth of prodigal turn". According to this argument in its early stages cinema was in a close relationship with animation.[148] With the automatic generation and projection of images

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[146] Thomas Lamarre, "The First Time as Farce: Digital Animation and the Repetition of Cinema", in *Cinema Anime*, edited by Steven T. Brown (England: Palgrave Macmillan, 2006), 161-188

[147] *Metropolis*, DVD, directed by Rintaro, (2001, Japan, Toho and TriStar Pictures).

[148] For instance, pro-cinematic machines such as kinetoscope or thaumatrope relied on hand-painted or hand-drawn images, loops that were manually animated . (Steve Reinke, *The World is a Cartoon: Stray Notes on Animation*, http://www.myrectumisnotagrave.com/writing/worldcartoon.html, (accessed July, 2009).

early cinema has developed into "the cinema" stage in which animation was ignored and in Manovich's words "was banished as cinema's bastard relative, its supplement and shadow."[149] The last stage which is digital cinema, on the other hand, is regarded as literally animation. In other words, similar to Lamarre's vision of transformation of cinema into something else, cinema is claimed to become a form of animation:

> "Born from animation, cinema pushed animation to its periphery, only in the end to become one particular case of animation."[150]

Steve Reinke takes this argument one step forward and cites Lev Manovich's definition of digital cinema, which according to him morphs into a redefinition of animation:

> "Digital film= live action material + painting + image processing + compositing+ 2D computer animation + 3D computer animation"[151] [152]

Based on these arguments it can be claimed that the boundaries between animation and digital cinema blurs. Although it might be true for some cases[153] it becomes hard to consider animation just as redemption. Former evaluation of animation as a fake medium which is the result of its artificial creation of reality rather than

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[149] Lev Manovich, *Language of New Media* (MA: The MIT Press, 2001), 298.

[150] Ibid., 302.

[151] Steve Reinke, *The World is a Cartoon: Stray Notes on Animation*, http://www.myrectumisnotagrave.com/writing/worldcartoon.html, (accessed July, 2009).

[152] This definition is examplified by the film *Waking Life* (2001) by Richard Linklater which was shot by a mini dv digital cam and then rotoscoped. Thus, it is an example of animation live-action hybrid.

[153] Animation in Taiwan is an example for such a case. They used computer generated animation to improve their own traditional puppet animations. More information can be found in the following article:
Teri Silvio, "Remediation and Local Globalizations: How Taiwan's 'Digital Video Knights-Errant Puppetry' Writes the History of the New Media in Chinese," in *Cultural Anthropology* 22, no.1 (2007), 285-313.

recording it, has evolved into a kind of astonishment and the fear of cinema's displacement by computer generated animation.

The existence of fully CG animated films such as *Final Fantasy: The Spirits Within*[154] , brings along other questions. The distinctive feature of such films is considered to be their relation to reality. Everything that appears on the screen from objects to characters is created by means of CG animation. In the simplest sense they are created out of nothing. This way of creation without any models is described, by Lamarre, as creating cinema without the medium and not having any "origins". In other words, CG animated films can imitate cinema without the medium of cinema. Thus the possibility of cinema's becoming a subset to animation becomes questionable.

Figure 2 : A screenshot from the film *Final Fantasy: The Spirits Within* (2001)

Once the potential of animation for creating new codes and imitating cinema without its medium is acknowledged, it also becomes evident that animation is more than conveyance of humor. Up till now animation has been the "other" of live-action cinema, however the possibility that now animation might turn cinema into the "other" of itself[155] indicates that animated film can be more than an innocent or ideologically neutral form intended only for children. It can be a space where imagination can be exercised freely. Thus it is also more than prosthesis.

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[154] *Final Fantsay: The Spirits Within*, DVD, directed by Hironobu Sakaguchi and Moto Sakakibara, (2001, Japan, Columbia Pictures).

[155] Özge Samancı, *Animasyonun Önlenemez Yükselişi* (İstanbul: İstanbul Bilgi Üniversitesi Yayınları, 2004).

2.3: METAMORPHOSIS AND ANIMATED BODIES

As already mentioned unlike live-action cinema, animation is not recording the reality but artificially creates it. This situation brings about the necessity of discussing the issue of representation. The main question that is asked in terms of representation is the possibility of representation of the world through computer based production of images. Taking Sean Cubitt's claim that in the history of the animated image, representation will become like narrative, a subcode of interpretation rather than an essence[156], Steve Reinke provides an answer to this question that takes animation far beyond the world of representations:

> "If we move from a lens- to a computer-based production of images, can there still be representations of the world? No. There will be no representations (and no world). Instead there will be vectors that move through representation in a process of endless becoming to produce concepts." [157]

The mentioned idea of "process of endless becoming" is based on and also exemplified by Emil Cohl's short animated film *Fantasmagorie*[158] which was produced in 1908. The whole film is 1 minute 17 seconds long line animation that consists of constant metamorphosis of a puppet and his environment.

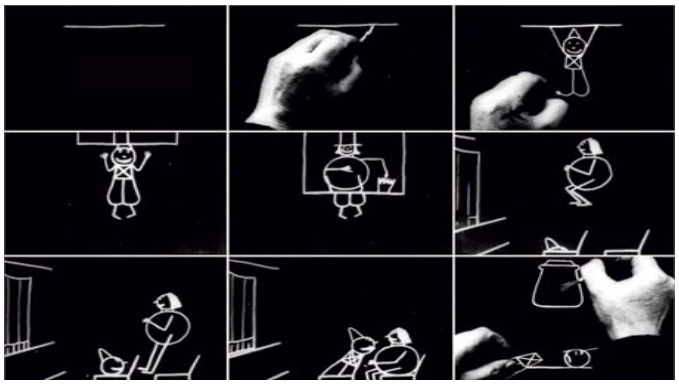

Figure 3: Drawing of *Fantasmagorie*. The film can be watched following this link: http://www.youtube.com/watch?v=aEAObel8yIE

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[156] Sean Cubitt, *The Cinema Effect* (MA: MIT Press,2004), 97.

[157] Steve Reinke, *The World is a Cartoon: Stray Notes on Animation*, http://www.myrectumisnotagrave.com/writing/worldcartoon.html, (accessed July, 2009)

[158] *Fantasmagorie*, directed by Emile Cohl, 1908.

Throughout the film, the puppet morphs into flowers, an elephant, a house and various other things without stopping. Reinke explains this situation with the double presence of the screen image as being an object and an image at the same time. It is expected that an object has a single, discrete and stable identity. However, for the case of *Fantasmagorie* it cannot be claimed to be true for it will be wrong to say that metamorphosing line is a flower, an elephant etc. For brief moments it refers to "conventional images" of flowers, elephants or houses, however, it is still and always a line and according to Cubitt this fact is what gives its transformative power".[159]

Paul Wells, on the other hand relates this issue more to the kinetic character of the narrative space in animation.[160] It can be said that he considers this unlimited potential for metamorphosis as an intrinsic feature of animation, however he does not consider this as an end to or shift in the representation of the world. He supports the idea that in animation there is no necessity to follow a certain consistency or internal logic of a realist film as it presents a space available for the emergence of new codes and condition.[161]

Metamorphosis of the body in animation, on the other hand, is focused more by Wells than the other forms of metamorphosis. He mentions eight ways to define the capacity and the capability of the body in animation[162]:

1. The body is malleable: It may be stretched over long distances, be compressed or extended, take the shape of another form, fit into incompatible spaces etc.
2. The body is fragmentary: It can be broken into pieces, reassembled and conjoined with other objects and materials.
3. The body is contextual space: It can be a physical environment in itself, which may be entered into and used as if it were ostensibly hollow.
4. The body is a mechanism: It may be represented as if it was a machine.
5. The body has impossible abilities.

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[159] The World is a Cartoon: Stray Notes on Animation. Can be reached from the website: http://www.myrectumisnotagrave.com/writing/worldcartoon.html.

[160] Paul Wells, *Understanding Animation* (New York : Routledge,1998), 192.

[161] T.R. Lindwall, J.M. Melton "Toward a Post-modern Animated Discourse," in *A Reader in Animation Studies*, edited by Jayne Pilling (Sydney: John Libbey and Company Pty Ltd, 1997), 203-219.

[162] Paul Wells, *Understanding Animation* (New York : Routledge,1998), 189.

6. The body directly expresses explicit emotions.
7. Bodies of humans/animals/creatures which are apparently incompatible are rendered equable in size, strength, ability etc.
8. Bodies may re-determine the physical orthodoxies of gender and species.

One of the attributed reasons for animation's excessive engagement with metamorphosis is resistance to the "logical case" as explained By Eisenstein. He states that the animated films, ignoring the historical source, the cultural position, and the acceptable limits of representing the subject, are ideologically neutral.[163] Paul Wells, on the other hand, considers this idea as conceptualization of animation as an "innocent" form. He suggests that "all the things that Eisenstein suggests Disney excludes- origins, reasons, causes, conditions and pre-conditions- become the crucial premises of enquiry, not merely in how the body is constructed, but in what it means, even in despite of its mutability". [164] It may be argued that mutability does not just serve for the humorous aspect of some animated films or for adding fluidity to the visual style. What the body mutates into is something that should also be considered in terms of its possible contentwise implications. Thus, body in the animated films is to be analyzed not "in despite of its mutability" but, because of its mutability which helps animation break the boundaries of real physical world and the stability of the image by employing one or more capabilities listed above. In this respect, metamorphosis is considered to be one of the strongest tools of animation.

Susan N. Napier's argument which declares animation to be both a symptom and a metaphor for a society obsessed with change and spectacle, acknowledges both the cultural aspect of animation and the power of metamorphosis which is considered to be in strong relation with the representation of post-modernist idea of fragmented and / or fluctuating identity:

> "Animation's emphasis on metamorphosis can be seen as the ideal artistic vehicle for expressing the post-modern obsession with fluctuating identity."[165]

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[163] Ibid., 188-189.

[164] Ibid., 189-190.

[165] Susan J. Napier, *Anime From Akira to Princess Mononoke* (New York: Palgrave Macmillan, 2001).

For example, in FLCL robots merge out of the teenage characters' heads which is associated with the schizophrenic loss of identity along with the feeling of power and freedom.[166] Other analysis that focus on the post-modern aspect of animation, on the other hand, focus more on double-coding, intertextuality, and use of parody and /or pastiche.[167]

In this study parallelisms in the post-humanistic arguments of the human body and features of animated human bodies are followed. Acknowledging metamorphosis as one of the strongest tools of animation, metamorphosis is analyzed over animated human bodies. Ignoring the possibility of postmodernist ideas of fragmentation and / or loss of identity that might be conveyed, metamorphosing bodies, taking also the production process into consideration, are analyzed in terms of mixed post-humanistic fears, enthusiasms, curiosity, anxiety. In addition, they are also considered in terms of their relation both to the world and the animator(s) and also to their own simulated virtual environment.

When the idea of post-human body as "never stable, never idealized, never normative, never confined"[168] is re-considered in terms of animated bodies and their power of metamorphosis, a parallelism and similarity can be observed between them and the post-human bodies. In addition, it can also be claimed that this changing and (technologically) developing animated bodies are the reason for the fear of "otherization" or even the end of cinema.

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[166] Brian Ruh, "The Robots From Takkun's Head: Cyborg Adolescence in FLCL," in *Cinema Anime,* edited by Steven T. Brown (England: Palgrave Macmillan, 2006), 139.

[167] Lindvall and Melton basis this discussion mostly on the Warner Bros cartoons such as *Bugs Bunny* who parodies real people such as Holywood stars, situations, fairy tales etc.

[168] Colin Milburn, "Nanotechnology in the Age of Post-human Engineering: Science Fiction as Science," in *Nanoculture*, edited by Katherine Hayles (Portland: Intellect Books, 2004), 124.

In terms of metamorphosis, however, it can be useful to mention the comparison of morphing[169] and mutation as explained by Vivian Sobchack. Mutation for her is a more natural process while morphing is more about technology and active involvement in the act of transformation. While mutation is considered more in relation to appearance, morphing is regarded in terms of empowerment. Morphing is associated with new media, however, in contrast to what Paul Wells claims; it is not necessarily associated with being more progressive:

> Morphing merely opens a new space onto which the old transformative myths and their power struggles can be projected and replayed."[170]

Taking this statement into consideration then, it can be concluded that morh's function is to remediate the old myths through its new space created by technology. Its role is claimed to "represent and enact human transformation, metamorphosis, mutability outside human time, labor, struggle and power"[171]. The visible flux of morph's becoming is stated to change our conceptions of the human body and its animation:

> "Through the visible flux of the morph's becoming, we discern a metaphysical and meta-statically fixed and absolute essence of transformation and flux that undoes all our conceptions of human form and bodily animation."[172]

It is also made clear in this remark that the transformation represented through morph is closely related to the human bodies and the transformation they are subjected to by technology. Morph is seen as the representation of the malleability of the human

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[169] "To morph" is defined in Oxford Dictionary, Tenth Edition to change smoothly and gradually from one image to another using computer animation techniques.

[170] Vivian Sobchack, *Meta-morphing: Visual Transformation & The Culture of Quick-change* (Minnesota: University of Minnesota Press, 2000), 152.

[171] Ibid, 151.

[172] Vivian Sobchack, *Meta-morphing: Visual Transformation & The Culture of Quick-change* (Minnesota: University of Minnesota Press, 2000), 152.

body which is because of being regarded as a material surface made open to various manipulations. In Sobchack interpretation, this "visible representation and operations" make us fool ourselves that "we can conquer both our human flesh and temporality to get out of this world alive."[173]

However, in this study morph is not only considered as the representation of human body's becoming ambiguated and malleable because of being an object for science and technology but also analyzed as extension of the mind. It can be asserted that animation might be giving the chance to achive "to conquer both our human flesh and temporality to get out of this world alive" in our minds as the ideas are transferred into the animation space.

When the virtual space of animation where all the software developments are exercised by animators is taken into consideration, on the other hand, it becomes possible to claim that animation technology and space provide expanded human experience while at the same time externalizing the mind. The emotions and thoughts can be expressed in a virtual world by means of the animator's hand (and computer's mouse in the case of CG animation) through the animated bodies. In this case, following Lev Manovich's understanding of visual technologies as cognitive prosthesis of the mind and Carl Silvio's analysis of animated bodies as symbiosis of information and materiality, it can be claimed that both the animator and the animated bodies are human-machine hybrids.

Silvio's analysis is more focused on the animated body. Anime character's material body is considered as the animated signifier while it is also regarded as free floating information. It is pointed out that "anime character can remain intact as a concept but can be embodied in a variety of filmic bodies."[174] In Cubitt's analysis, on the other hand, the animator is much more involved and the "consciousness" of the

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[173] Ibid, 153.

[174] Carl Silvio, "Animated Bodies and Cybernetic Selves: The Animatrix and the Question of Posthumanity," in *Cinema Anime,* ed. Steven T. Brown, (England: Palgrave Macmillan, 2006), 129.

animation space is associated with the animator's fully functioning in the "machine" world:

> "The secret consciousness of the vector is this human-mechanical hybrid. Hence we can no longer speak of the author as originator of the cartoon: instead we are confronted with the animator, no longer a subject of the social world, but an exile seeking asylum in the machine world from all demands external to the world itself."[175]

It should be noted that this experience of the animator that Cubitt is talking about might be claimed to be different for independent and studio animators. As the independent animator might be away from the industrial aspects and concerns of the animation productioın s/he can be more "in the machine world." On the other hand, it might be interesting and also true to consider animations that are produced at a studio by huge groups of animators responsible for different sections of production, in terms of distributed cognition. These animations can still be regarded as human-machine hybrids, only with more people involved in the symbiosis.

The same condition of hybridization of the animator with the animated body and / or environment can apply not only to the CG animation but also to stop-motion animations as each puppet is "acted" by a sperate animator and thus becoming the body of the animator in the animation space:

> "A stop-motion sequence is a performance created individually by a lone actor bearing his or her soul through the puppet".[176]

For Jan Svankmajer, the process of stop-motion animation is "giving magical powers to things", providing the audience and the animator with different visions of the "things" that we encounter everyday while liberating the body which is mechanized by socio-cultural practice:

> "Animation enables me to give magical powers to things. In my films, I move many objects, real objects. Suddenly, everyday contact with

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[175] Sean Cubitt, *The Cinema Effect* (MA: MIT Press,2004), 83.

[176] Ken A. Priebe, *Art of Stop-Motion Animation* (Boston: Course Technology PTR, 2006), 7.

> things which people are used to acquire a new dimension and in this way casts a doubt over reality. In other words I use animation as a means of subversion."[177]

In the context of the computer generated animation, on the other hand, the "reality" of the objects and the space are created via computer, however, despite the different process of animation adopted by the each technique, the sense of getting hybridized with the animated body and / or the environment stays and animated bodies embody and / or externalize the animator's ideas, feelings, dreams, fears, wishes, etc. In this case, although it might be wrong to consider animation medium as prosthesis to live-action cinema, it might be true to conceive animation technologies and the animation space as prosthesis to human mind and a way of enhancing the human experience and capacities for creating art and draw emotions in a virtual space.

2.4: CONCLUSION

The medium of animation, although it has been considered just a way of conveying humor and a form of entertainment majorly intended for children, it can be and becoming a means of expressing a lot more than humor. It serves for the actualization of virtual imagination in another virtual but this time sharable space where the gap between feelings and thoughts and actions look like to be eliminated. Concepts rather than mere representations are produced thanks to animation's being open to emergence of new visual codes.

Looking at the animation medium and its ways of functioning Hayles' claim "we anthropomorphize the virtual creatures while they computationalize us"[178] can be re-considered from a different perspective in terms of animation: The animator and the animation (can) hybridize in the animated space without leaving the traces of any boundaries of the each side.

Besides, animated human bodies can be both metaphors and literal images of the fluxing and transforming post-human bodies which are or can be manipulated, represses

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[177] Jan Svankmajer, cited in Paul Wells, *Understanding Animation* (New York: Routledge, 1998), 90.

[178] Katherine Hayles, "Simulating Narratives," in *My Mother Was a Computer* (Chicago: Chicago University Press, 2005), 93-213.

or changed with technology and the cultural, political and social changes that it may bring about. Animation's power to create reality rather than recording it may also put it in an advantageous position in terms of the reflections of a critical future that is tried to be drawn in science-fiction movies.

In the next section, in order to be able to reflect more on the animation and live-action media and their effect on the representation and metamorphosis of the human body *The Matrix Trilogy*[179] and *The Animatrix*[180] series are analyzed both in terms of the media adopted and the possible implications or interpretations of these representations in terms of "freedom of the mind" as it is envisioned by post-humanistic arguments. To be able to achieve this purpose the selected scenes are chosen and analyzed according to the following criteria:

1. The media that are employed in the production of the scene.
2. Mechanical, electronic and digital enhancement of the body.
3. The purpose of adoption of metamorphosis, the way it is represented through different media.
4. Alteration and change in the characters portrayal following disembodiment and mind embodiment.
5. Different representations of human body through different media.

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[179] *The Matrix*, DVD, directed by Andy and Larry Wachowski (1999, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).
The Matrix Reloaded, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).
The Matrix Revolutions, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

[180] *The Animatrix*, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

CHAPTER III

CASE STUDY:

A COMPARATIVE ANALYSIS OF THE MATRIX TRILOGY AND THE ANIMATRIX SERIES IN TERMS OF MEDIUM: METAMORPHOSIS OF THE (POST) HUMAN BODY AND FREEDOM IN THE ANIMATION SPACE

3.1: REASONS FOR CHOOSING *THE MATRIX* :

The very first reason for choosing The Matrix Trilogy and The Animatrix for the purpose of this study is that the two series have a similar content but were produced through different media. Thus, they provide enough space for a comparative analysis of the mentioned questions.

It should also be noted that although they were produced through different media they are hybrids of different forms. For instance they were both influenced majorly by Japanese manga and Japanese anime the fact of which gives the both series an impression of sharing the same style, at least on the surface. In addition, it was considered that their being hybrid forms can shed some light or bring different perspectives to the issue of human-machine symbiosis both in terms of the production of the films and the post-humanistic arguments. The word “post” is written in parenthesis in the title, as in some cases the human bodies in the both series can be considered just as humans and in some others they are not aware of their potential.

Besides, being about a great change that human race can experience, both series provide crucial examples of metamorphosis which is, as afore mentioned, considered to be one of the strongest tools of animation, are observed in different ways in the animated films and the live-action films.

In addition, although there is a lot of analysis on *The Matrix* films, not much has been said on *The Animatrix* which is a little ignored or treated just as the animated version of The Matrix films. It is considered *The Animatrix* both because of being an

animated film and combining more than one style and animation techniques can provide new areas for analysis or new perspectives for the old ones.

3.2: THE WORLD OF MATRIX AS A CRITICAL DYSTOPIA, ANIMATION AND LIVE-ACTION:

As already mentioned, *The Matrix Trilogy* and *The Animatrix* share the same content. All the episodes of both *The Animatrix* and *The Matrix Trilogy* are about a world that is called "critical dystopia" by Peter Fitting which refers to a dystopic world that not only depicts a terrible future but also explains how dystopian conditions occur and what should be done about it. Critical dystopia also involves elements from our present that might lead to the dystopic future portrayed in the film.[181]

The world of *The Matrix Trilogy* and *The Animatrix* depict a presence which is our presence, but an artificial one in which human beings are exploited as energy resources for machines. People live in small capsules generating energy for the machines via their wired bodies believing that they are in the year 1999 without being aware of the fact that the world they are living in is just a simulation. Their current situation is the result of a war at the end of which machines are the winners. They have to use human bodies as energy resources, because the sky is covered by human beings during the war to hinder the sun which was the major energy source for machines. The last members of the human race live in Zion which is the last human city. Its residents consist of the people who either "woke up" or were born in Zion. In this sense, *The Matrix Trilogy* and *The Animatrix* question our reality while presenting a dark future which makes the both series a critical dystopia.

The main differences between *The Matrix Trilogy* and *The Animatrix* series, on the other hand, can said to be the way the stories expand to tell the details about the

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[181] Peter Fitting, "Unmasking the Real? Critique and Utopia in Recent SF Films," in *Dark Horizons: Science Fiction and the Dystopian Imagination*, edited by Rafaella Baccolini and Tom Moylan (New York : Routledge, 2003), 156.

society of the artificial world of the Matrix, the media of live action cinema and animation the two series employ and the diverse attitudes displayed towards machines.

The Matrix Trilogy is, for the most part, the story of Neo who is believed to be the messianic "One" to save the human race. Through the second and third part of the trilogy the story expands and transforms into a collective struggle from an individual desire to escape from the fake reality.[182] However, Neo stays as the major character who does his best to fight the evil machines. *The Animatrix* on the other hand, consists of nine episodes each of which provides the stories of separate individuals. The movie has a more positive attitude towards machines which makes it differ from *The Matrix Trilogy*. In *The Animatrix* machines are not represented as purely evil.

Another difference between the Animatrix and the Matrix Trilogy is the presentation of the reality and the virtuality which can be stated to be the result of the two different media of live action cinema and animation. In both movies the real and the virtual life of matrix are not visually distinct from each other. In the Matrix Trilogy the employed medium is live action cinema for both the virtual and the real while in the Animatrix it is animation. These two media require and/or provide different displays of metamorphosis of the human body. In the animation the background along with the bodies are metamorphing:

> "Not only does the body morph, but the air itself as well… The space itself is speaking. The background behaves as if it were alive. It forces changes that are uncanny, chaotic, even animistic, …"[183]

It may be said that thanks to the special effects which involve computer generated imagery, metamorphing space of animation can be provided to some extent for the live action film as well. However, in *The Animatrix* the human bodies are also computer generated which makes their representation and experience of embodiment different than that of the real human bodies of *The Matrix Trilogy*. Following Katherine

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[182] Peter Fitting, "Unmasking the Real? Critique and Utopia in Recent SF Films," in *Dark Horizons: Science Fiction and the Dystopian Imagination*, edited by Rafaella Baccolini and Tom Moylan (New York : Routledge, 2003), 161.

[183] Norman M. Klein, "A Brief Disappearing Act: Animation and Animorphs," in *Meta Morphing: Visual Transformation and the Culture of Quick-change*, (Minneapolis and London: University of Minnesota Press,2000), 23.

Hayles' explanation of "embodied experience as coming not only from the complex interplay between brain and viscera but also from the constant engagement of our embodied interactions with the environment"[184] it may be claimed that the technology and the medium employed in the two films demonstrate distinct forms of metamorphosis and thus distinct experiences of embodiment both for the characters in the film and the audience.

3.3: METAMORPHOSIS OF THE HUMAN BODIES AND POSSIBLE INTERPRETATIONS:

3.3.1: THE MATRIX TRILOGY: TOWARDS MACHINE TOWARDS REALITY

When the Matrix Trilogy and The Animatrix are separately watched it can be observed that more metamorphosing bodies are involved in the animation series. In the trilogy the transformation is experienced at the "inside" not on the surface of the body. In this sense, it can be claimed that mutation, as it is defined by Vivian Sobchack, is what is experienced by the human bodies. However, as opposed to what she claims, mutation is not just about appearance. It is slow and happens naturally, but this time it is about changing from the inside, becoming more powerful on your avatar and gaining the capability to control and manipulate it in the Matrix. It is also becoming aware of the reality of the Matrix.

However, before these happen, the ones who "wake up" have to get used to using their "real" bodies which actually are trapped in a capsule as an energy source and thus never been used before. First, their muscles are filled with life, and then, they are taught how to free their minds from their bodies, the issue of which will be dealt in the later section.

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[184] Katherine N. Hayles, "Flesh and Metal: Reconfiguring the Mindbody in Virtual Environments," in *Configurations: A Journal of Literature, Science and Technology* 10:2, special issue (2005), 298.

Figures 4 and 5: Neo wakes up in the capsule to see that he has been used as an energy source all this time. He frees his body from the capsule.

Thus, it can be claimed that in the live-action films metamorphosis starts with the body's awakening into the real world and then becoming a fully functioning body. This is followed with overcoming the bodily boundaries and freeing the mind from the body. The more freedom Neo gains the closer he gets to Agent Smith in terms of his abilities of manipulating his avatar body and the fake physicality of his environment. However, except for gaining power over the bodily actions there is no visible metamorphosis that the humans of the Matrix, including Neo experiences. It is only the nature of humans' interactions with the environment that change. Words along with the actions are the indications of the experienced metamorphosis.

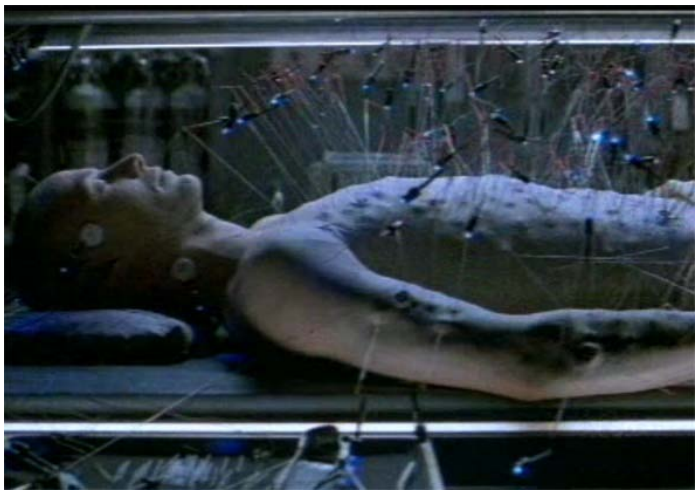

Figure 6: The process that Neo's body goes through to be able to gain its physical functionality after he wakes up in the capsule.

It can also be claimed that after Neo wakes up his relation to the machines and of course to the Matrix continues, however, in a very different way. Before he wakes up

there is the feeling of doubt over the difference between the reality and dreaming. He even claims that it sometimes feels more real when he is dreaming. When he wakes up he faces the reality that he has been living in a capsule just like many other fellow human beings thinking that the Matrix is the real world. It can be claimed that his complete comprehension of the constructed reality of the Matrix happens as his abilities improve. As his mind gets freed his body starts to do magical things such as stopping the bullets or flying like Superman.

It can be stated that he gets closer to the machine in order to be able to manipulate the reality of the Matrix. In this case it can be said that like the real world the world of Matrix has its own systems of organization, institutions of functioning. There is even a program speaking of love and claiming that it is just a word, but it is in fact refers to the connection people, or in this case programs, connecting to others. Neo and all the other people who woke up into the real world learn these organizations, institutions and their functioning and then they transform their bodies and minds accordingly.

In this sense it can be claimed that Neo's discovery of the world of Matrix is very similar to the discovery of the animation space and the freedom it provides for the animators. Rules of live-action do not apply in the animation space as all the reality is simulated. Thus, it can go far beyond repetition or imitation of live-action cinema.

In all three films it is most of the time Agent Smith that leads the metamorphosis of the other characters in The Matrix. He can copy himself and transform other characters into himself whenever he feels the need. For his case, the metamorphosis can be claimed to be more related to having the power and practicing active involvement that is associated with morphing in the previous section of this study.

Although he and Neo are the parts of the same system their relation to this system are different from each other in nature. Neo's relation to the Matrix is a more symbiotic one. He needs the machines in order to be able to be in the Matrix. However, Smith can be treated as a pure machine. His metamorphosing is sudden, quick, powerful and also visible. It is more mechanical and lacks feeling or the expression of "inner" change.

Figure 7: Neo and Morpheus are in the training program. Neo is "freeing" his mind which is made visible through his body.

Figure 8: A driver's transformation into Agent Smith who is upgraded in the second episode *The Matrix Reloaded* and thus can copy himself.

As it can also be observed in these screen shots Agent Smith is practicing his power over other bodies by transforming them into himself. Neo, on the other hand, tries to liberate his own body from the illusion it has been living for years. He can be regarded as a demonstration of Svankmajer's suggestion that "the social order predetermines the capacity of the body and prevents it from breaking out of its limits both biologically and socially".[185] In Neo's case, once he learns the reality about his regular life in the Matrix, in the year 1999, he breaks both his mental and bodily boundaries.

When this situation is considered in terms of Agent Smith, it can be said that he is the actualized and visualized repressive power exercised over other bodies in the Matrix. He might even be considered to be the embodied version of all social and political bodies that exercise power over the construction and understanding of the body that Svankmajer is talking about. When the post-humanistic fears are taken into consideration, Agent Smith and his power for metamorphosis become the representation of the human bodies' susceptibility to technological interferences and transformations

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[185] Paul Wells, "Body Consciousness in the films of Jan Svankmajer," in *A Reader in Animation Studies*, edited by Jayne Pilling (Sydney: John Libbey and Company Pty Ltd, 1997), 177-194.

that are possible to be enacted. He illustrates the bodily ambiguation as a practice of power.

Neo's body on the other hand, by resisting Agent Smith, becomes an agent of action and change. His last fight with Smith can be interpreted as a symbolic fight between the machines and humanity. Their power is almost equaled. When Neo wins the fight it looks like the triumph of humanity over machines. Ability to love and having free agency are underlined to be the most significant elements that make humans different and also superior to Agent Smith, and thus machines.

Figure 9: A screenshot from the last fight of Neo and Agent Smith at the end of which Agent Smith and his clones are destroyed.

It should also be noticed that just before Smith's destruction he transforms Neo into himself and thinks that "it is over". However, Neo as "the One" destroys Agent Smith and his "many" other copies. As the Oracle also notes Agent Smith is the opposite of Neo. All through the film as Neo comes closer to machines and starts to understand machine world better, Agent Smith can be claimed to be anthropomorphized maybe because among the clones of himself there are also human avatars. Thus, while Neo is machine-ized, Agent Smith is humanized. It should also not be forgotten that Neo negotiates with and is helped by machines to be able to defeat Smith who starts to become a threat to the system as a free agent.

Figure 10: Smith's transformation of Neo into himself. **Figure 11: Neo's destruction of Smith and his clones.**

With his fight with Agent Smith, Neo saves Zion and peace is achieved at least for a while as noted by the Architect. It is promised that the ones who wish to get out of the Matrix will be released. However, despite the peace settled between the two sides of machines and humans and despite humans' symbiotic relationship with machines, they still hate each other and there is still a clear cut difference between machines and humans. There seems to be no racial discrimination in the city of Zion, most probably since it is the last human city with a small human population, however, two new races can be claimed to be born out of this fight: humans and machines. There is even a struggle on humans' side to be "pure" humans.

Machines are damned as pure evils that capture disembodied consciousness of human beings. In order to be able to avoid this, humans should learn to manipulate their avatars. Boundaries between machine and human, good and evil, the Matrix and the real world are very certain once the person wakes up in the capsule.

Apart from Agent Smith, Merovingian's twins are the other two characters that have the power of metamorphosing. They are the programs which have the capability of moving through objects and becoming ghosts. Their morphing is again momentary, gained through technology and they are the agents of this transformation.



Figures 12, 13, 14: The twins and their metamorphosis in the second episode of *The Matrix Trilogy: Matrix Reloaded*

Although, they can choose to morph into ghosts, they can do so because of the nature of their program. Their bodies can dissolve into the walls or floors which make their bodily boundaries blurred. They are more machines rather than free agents and as machines they are evil.

Another point that should be noted is that, despite the fact that hybridity of humans and "machines" exist in the production of the film, in the story they always try to get away and be distinct from each other. Human beings' bodily integrity is destroyed by machines. This is both the reason of the fight and also the means of fight at the same time. Humans and agents share the same space, but humans' existence in the Matrix is provided by their bodily integrity, their minds are embodied in their virtual avatars which are the exact imitation of their real bodies. Their selves are in their complete, fully represented bodies which have extended abilities of manipulating the space.

Thus, in relation to these discussions it can be concluded that, in *The Matrix Trilogy* bodies' metamorphosis happen through the minds not through the bodies. The unpredictable, fluxing and ambiguated bodies are associated more to the programs

rather than to the humans. Human bodies' stability on the other hand, may be related to the resistance of the body to the existent system and fluctuating space. They are already turned into post-humans through their close relationship with the machines and ability to be uploaded into the Matrix, however, still, they want to preserve their own reality.

3.3.2: *THE ANIMATRIX* VS. *THE MATRIX TRILOGY*

In *the Animatrix* which is based on *The Matrix Trilogy* but involves different stories along with different representations, on the other hand, in contrast to *The Matrix Triology* there are more scenes involving metamorphosis. In addition, in some episodes the representations of the bodies along with the space morph which provide the better expression of the feelings and / or point of views of the characters. Thus, in *The Animatrix* films metamorphosis is not just about gaining the power, showing resistance or becoming a consciousness that is possessed by an agent. The selected scenes are analyzed both in terms of the representation of the post-humanistic arguments about the body and the way animation medium effects these representations.

THE FINAL FLIGHT OF THE OSIRIS[186]

Among the nine episodes, the one that is most close to the live-action cinema and to *The Matrix Trilogy* in terms of the representation of the human bodies is *The Final Flight of the Osiris* which is a three dimensional animation. The scenes, actions and representations of the characters are quite similar to that of *The Matrix Trilogy*:

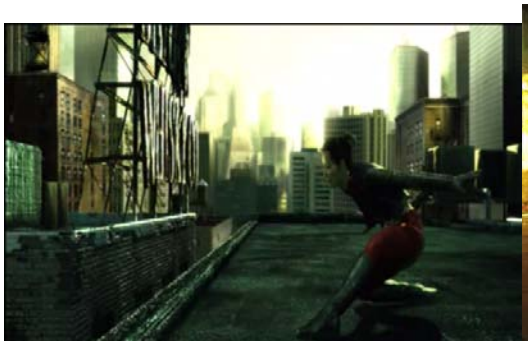

Figure 15: A screenshot from *The Final Flight of the Osiris*

Figure 16: A screenshot from *The Matrix*

[186] "The Final Flight of the Osiris," in *The Animatrix*, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

As it can be observed in the above screenshots it is very difficult to distinguish the animated one from the live-action. In the both films anime style is adopted and re-mediated in the 3D animation on the left and live-action animation on the right. Thus, The Final Flight of the Osiris can be considered as a double way simulation: On the one hand, it is the representation of the real world while on the other it tells another story of the Matrix. By looking at this film, it is difficult to tell which medium is imitating the other. They are both influenced by manga and Japanese anime the traces of which are quite visible in the both scenes. They both give a very uncanny sense of reality which might be the result of animation in the first one, and the green screen for the second one.

The idea of animation and live action films coming closer to each other is also supported by Shinichiro Watanabe, the director of *The Kid's Story* and *Detective Story* :

> "Ever since I started working as an animator I never felt that there was too much of a distinction between animation and live-action. Watching The Matrix I feel pretty strongly that the two worlds are coming closer together. So I hope I can keep working to erase those borders.[187]

He, as an animator, does not talk about the superiority of one form over the other, but talks about the hybridization of styles and erasure of the borders. The above screenshots can serve as proofs to his point of view. In the both scenes, both characters have already achieved the "freedom of mind" and adapted their bodies to the world of the Matrix. It can be said that this film represents the animation and live-action film's morphing into each other.

THE KID'S STORY[188]

The Kid's Story, another episode of *The Animatrix* is different from the other films, in terms of reflecting the way the Kid feel about the world he is living in. He is not certain about reality. He cannot tell reality from the dream. This feeling is reflected through a ever flickering depiction of the body and the environment which loads the

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[187] Shinichiro Watanabe, "Bonus Data," *The Animatrix*, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

[188] "The Kid's Story," in *The Animatrix*, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

scenes with a feeling of having a dream or uncertainty. It looks as if the body of the kid is about to morph into something or the environment is about to meld or bend, but nothing happens.

The first metamorphosis occurs when he realizes the agents and starts running. Everything including himself turns into two dimensional paper-like entities that stretches and extends in space. This metamorphosis seems to serve for giving the feeling of the running. Because of the speed and fear everything the kid sees is deformed. Once he stops everything goes back to normal.

In the below screenshots, it is observed that the place looks more solid and stable while the agents seem to deform and become more threatening while he is running away from them. When he gets caught and realizes that there is no place to run, the agents turn back to their ordinary forms. This stabilization can be also be interpreted as an indication that there is no other place for the kid to run: That is the freezed moment of facing the situation in hopelessness and also the moment of making a very extraordinary decision. The tension is increased both for the viewer and the kid.

Figure 17: While the kid is running: 2 dimensional deformed agents

Figure 18: Agents turn into their ordinary forms when the kid gets caught and everyone stops running.

It can be claimed that Kid's Story makes what Mahiro Maeda, the director of the Animatrix episodes Second Renaissance I & II, clearer and visible:

> "Japanese animation is more about the feeling of the world, the atmosphere of the story."[189]

Both the space and the bodies of the characters morph making the feelings and characters' ability of manipulating the space visible. Besides reflecting the boy's feelings and the point of view, the unpredictability, instability and "unreality" of the world in which he has been living for real. At the end, when he jumps of the roof it gives the impression that it is being asserted by the kid that even if his body is a virtual avatar, it is the kid who possesses it, not the agents. He restores his consciousness to his flesh and bone body. Once again, the flickering of the images stops, his body, the atmosphere and the environment stabilize. In other words both the kid and the animator are restored to the reality.

The only scene that might be regarded as similar to the ones in The Kid's Story that casts a doubt over reality is the one in the first episode of the Matrix Trilogy where Neo looks in the mirror which seems to be very unstable and also liquid. (please see the picture below) Doubting his senses he acts surprised and touches the mirror and the mirror gets into his body starting from his fingers. The metallic liquid covers his body inside and outside and this process ends with Neo's waking up in his capsule to face the reality about himself and the real world. He saves himself from being just a virtual reflection in the Matrix which can be considered to be mirroring the world by means of keeping all the rules, traditions, ways of "our" world, and restores his self to his real body.

His body's mingling with the liquid can also be the indication of the fact that in the Matrix the boundaries between the humans and other objects are very blurred. They are codes and they are manipulatable.

However, this scene, which can be considered as another metamorphosis scene, does not refer to the feelings of the character. The implications made are more

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[189] Mahiro Maeda, "Bonus Data," in *The Animatrix*, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

contentwise rather than Neo's personal interpretation of the world or the events happening around him. It can be claimed that most of the time in the expression of the feelings flickering or morphing images are replaced by words or actions.

Figure 19: Neo touches the liquid like mirror and his body is covered by the cold, metallic liquid.

In conclusion, it can be said that *Kid's Story* presents both the fear and anxiety that results from the bodily ambiguation and doubt over reality and the feelings of an individual kid living in the matrix. As he believes more in the virtual features of the world he has been living in the more confident and fearless he becomes. Besides, because of the film's competency in the expression of the feelings it might not also be wrong to suggest that it also serves as a demonstration of the animation space's providing extended experience along with the subjective representation of the world.

SECOND RENAISSANCE I & II[190]

The next selected sequence does not involve the metamorphosis of a body or an object, but a series of metamorphosis which can be interpreted as the ways the knowledge is embodied.

The sequence starts with an apple, the symbol of knowledge and followed with its transformation into human brain to which a human body is added. Then the body spreads to the world which, in the following seconds gets smaller and ends up in the hands of a virtual woman who is responsible for the Zion archive:

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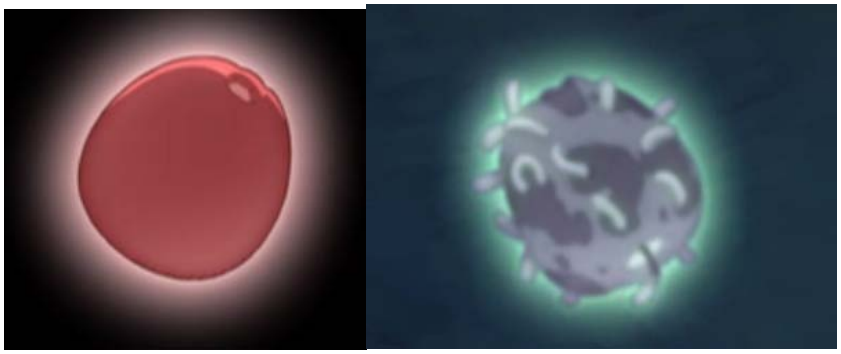
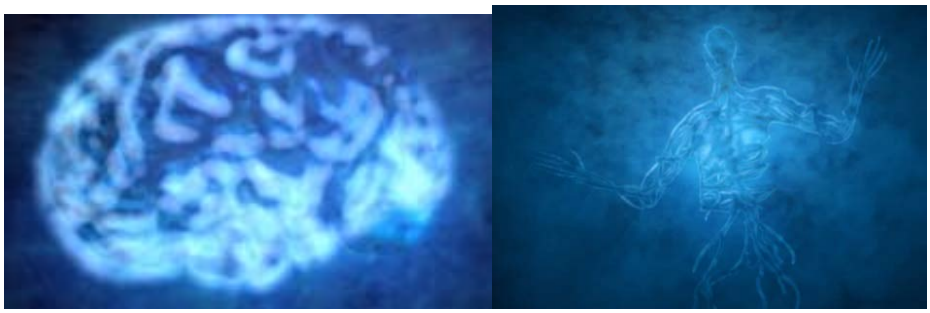
[190] The Second Renaissance I & II," in *The Animatrix*, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).



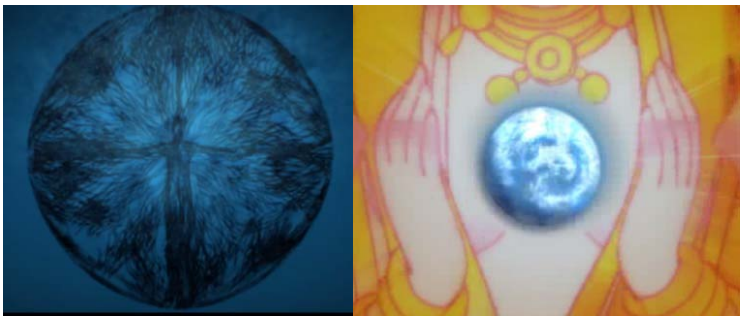
Figures 20 & 21: An image of apple appears on the screen, first worms start to come out of it…

As it is also seen in the screenshot 20, the apple-knowledge looks very attractive at first, however, in time it is consumed and "cultivated" and becomes the most significant possession of the human brain. It is considered to be "in" the brain.



Figures 22 & 23: And then the wormy apple turns into a human brain which is completed into a human body.

The metamorphosis goes on and a human body grows out of the brain which starts to expand. It looks like as if the brain governs, owns and forms the body. Then a circle is formed around it in which it goes on spreading. The circle, with the knowledge spreading out from the human forms the world which then gets smaller and smaller. In the end, the audience sees it in the narrator's, in other words the virtual archive agent's hands. It is as big as an apple, but this time it is "small" enough to be transferred and controlled in the virtual world.



Figures 24 & 25: Human body spreads and forms the world which gets smaller and smaller

It should be noted that, *The Second Renaissance I* and *II* narrates the war between humans and robots from beginning to end. Thus, looking at the screenshot 24, it can be claimed that human knowledge is held responsible for the "darkening" of the world. It is embodied in different forms and transferred into the environment until someday it is completely got out of the human body and prepares the grounds for the formation of the matrix where human bodies become just sources of energy.

The metamorphosis of the apple is the sequence that ends the first episode. It is seen again in the second episode of the *The Second Renaissance*, this time in the hands of a robot who asks humans to hand in their flesh as an energy source because he claims that the flesh "is a relic, a mere vessel". Then the people are captured and locked in capsules and feed robots with their endless thermal, bioelectric and kinetic energies. The knowledge human beings use to control and reign nature spreads to form other intelligent forms which in return objectify and use them as resources. Thus, it becomes apparent that at the end of the Second Renaissance it is machines that defeat darkness and become masters of knowledge. Robots learn enough to control and use human bodies. And the narrator ends her historical narration:

"Bless all forms of intelligence"

In the *Second Renaissance Part I* another notable scene is the one where humans attack a robot woman in the street and "kills" her[191]. A beautiful, human replica's skin is torn apart and her body is smashed into pieces by a few men. As her skin is torn apart and metallic body is exposed to the attackers and to the audience the cycle of her becoming is also made visible: First she is given a human appearance, her metal body is turned into a woman and then she is turned into her previous form again and finally terminated.

[191] According to the Zion archive this event takes place in the world just befor e the great war between humans and robots begin.

Figure 26: "Woman" robot is attacked and restored to its non-existence.

The background history of the Matrix is not told in *The Matrix Trilogy*, but only in the *Animatrix* stories. As opposed to the "evil" machines of *The Matrix Trilogy* the audience is left face to face with evil humans who caused their own destruction. A lot of humans die at the war, but they also start the genocide destruction of the robots. For their representation of the war, it can be said that *The Animatrix* stories also provide the machines' perspective. There is no pure good or evil. It is difficult for the audience to position themselves. However, in the trilogy machines are to be afraid of and humans are to be saved.

According to Carl Silvio, this situation might be the result of the sense that is provided by the anime medium: Being technologically produced, it is not so weird that *The Animatrix* is treating the machines in a more positive way than the live-action films.[192]As already mentioned Silvio suggests that anime bodies can be regarded as human-machine hybrids. It can be argued that producing animation requires uploading the consciousness into the virtual animation space to some extent. David Clerk's definition of animation as image-code hybrid can be extended and claimed that animation is the symbiosis between image – code - human.

It may also be this hybridization that opens space both for the machines' and the humans' perspectives in the story. Feelings and thoughts are re-embodied in the characters. Similar to agents in the Matrix it is easier for them to metamorphose, however, this time they represent human beings and imply not the ones exercising power, but the ones who become or feel vulnerable and fragile because of the prevailing power of the machines. As a result the feelings and thoughts that emerge in relation to

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[192] Carl Silvio, "Animated Bodies and Cybernetic Selves: The Animatrix and the Question of Posthumanity," in *Cinema Anime,* edited by Steven T. Brown (England: Palgrave Macmillan, 2006), 113-138.

developments in technology which also shape the post-humanistic arguments are embodied in a virtual space and expressed through a technological means which create the uncanny feeling in *The Kid's Story* and in the other *The Animatrix* films.

WORLD RECORD[193] & DETECTIVE STORY[194]

World Record is very similar to *The Kid's Story* in terms of the main character's desire and trial to transcend his virtual body. At the very beginning of the film the narrator tells that "only the most exceptional people become aware of the Matrix. Those that learn that it exists must possess a rare degree of intuition, sensitivity and a questioning nature" and it is also pointed out that Dan, the runner is one of those who finds out this through different means.

Then the audience sees that he is a runner who tries to break the world record although that is what he already achieved and there is a possibility that his muscles might explode. He decides to do that whatever it takes. While he is talking to a reporter he explains his feelings with these words: "You are released from the world, you are totally free".

While he is running every muscle move is made visible and audible. (Please see picture 27). His effort can be seen on his face, the noise of his breathing and the running is emphasized and presented in slow motion which makes each and every body movement of the runner looks like he is trying to break free of his body instead of a world record.

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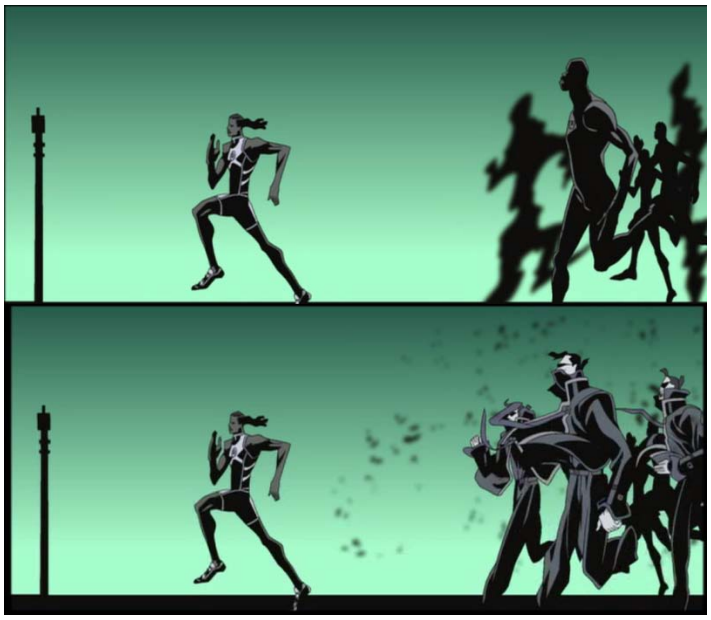
[193] "World Record," in *The Animatrix*, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

[194] "Detective Story," in *The Animatrix*, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

Figure 27: Dan, while he is running for a new world record.

When the agents understood that he is about to wake up they take the control. Again in slow motion all the other runners behind him transform into agents who try to catch Dan.



Figures 28 & 29: Metamorphosis of the runners into agents.

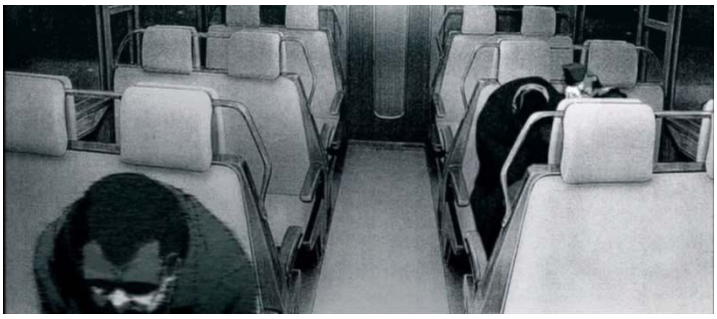
One by one runners' bodies transform into dark silhouettes which look like smoke that can be shaped into anything, then they take the form of the agents who try to reach Dan so that he will not wake up. Dan gets his freedom and he wakes up in his capsule for a moment. However, as he is not aware of the reality until that moment, he does not have the power or ability to escape from the agents.

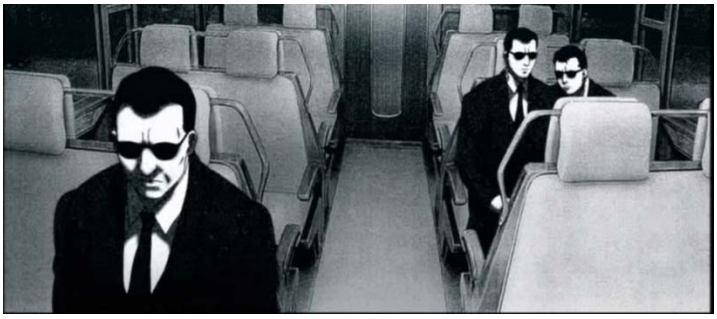
In this film the way metamorphosis of the runners is represented is different than that of the trilogy. There is a smooth transition first to the smoke like, unidentifiable

bodies and then to the agents' bodies. On the other hand, in the trilogy especially in the third episode *The Matrix Revolutions*, agent Smith transforms the others by literally "inserting his hand" into their bodies. Thus, it can be said that in the animation bodies seem more vulnerable, ambiguous and easily modifiable while the invasion of the body by the agent and his establishment of his power over the others are more emphasized or made more visible in the live action films.

Taking the sudden and complete metamorphosis of the bodies into consideration, it can also be asserted that the boundaries between bodies and the environment are also more fluid and blurred in animation. As it can be observed in the above screenshots bodies become dematerialized or "de-molecule-ized" and pixilated and dwindle into the space. However, instead of disappearing they transform into other bodies.

Another *The Animatrix* film that is similar to the World Record in terms of metamorphosis of agents is *Detective Story* which tells the story of Trinity and a detective who is hired by the agents to find her. Finally he finds her on a train. The audience is informed by the fact that the detective is followed by the agents when three passengers transform into agents. The bodies become noisy and grainy like a television screen that is magnetized and then the metamorphosis occurs. (Please see screenshots 29 & 30)





Figures 30 & 31: Metamorphosis of the passengers into agents in *Detective Story*.

In both Detective Story and World Record, agents seem to be more able and quick in manipulating the space. Unlike Agent Smith in the trilogy, they do not have to touch the other people in order to be able to transfer him/her into themselves. They can just transfer themselves into them. Although, they can move and act more freely in the animation space, Agent Smith looks more threatening and frightening which might be the result of the way he metamorphose others and the fact that the trilogy is a live action with real human bodies. Metamorphosis in animation seems more possible and "natural", however when it happens to a flesh and bone human body in a live action film, even if it is done through animation techniques, it increases the tension and fear in the audience, because although it is fiction it records "reality".

MATRICULATED[195]

What makes *Matriculated* different from the other mentioned *Animatrix* films and *The Matrix Trilogy* is the metamorphosis of a machine into a human when it is uploaded into the Matrix. So far, all the analyzed sequences involve representations of metamorphosis of humans into machines. In *Matriculated* a robot is captured by humans and tried to be "converted" into humans' side. A group of human beings who woke up from the Matrix try to find out whether it will be possible to change the robot's mind about capturing and killing people. For this purpose the robot is uploaded into the Matrix with the human team. At first the robot keeps its real form, then, after a little while its body transforms into a human body. (Please see screenshots 31, 32, 33, 34).

Figures 32, 33, 34: Veins grow out of the robot's body. **Figure 35: The robot is in complete human form**

[195] "Matriculated," in *The Animatrix*, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

The metamorphosis starts with the vein like stipes that start to grow out of the robot's body. These veins cover all its body and then they disappear into it which gives the impression that the root has not only transformed into a human body but also into a flesh. It is emphasized that under the shiny metallic body of hers there is a flesh and bone body. It is also notable that before the robot turns into a human being it is genderless. However, after the transformation its body looks more like a woman.

In this metamorphosis sequence, being converted into humans' side is visualized by means of transforming the robot into a regular human body. Thus it is made clear that it is not only the body but also the form of the body that makes a human.

Another point that worth mentioning is the very fact that the way the robot is converted is very similar to that of the agents' transforming of the human beings into themselves: The transformation is conveyed to the audience through the metamorphosis of the body and it happens without the control of the people that are transformed. In *Matriculated* the robot also has no idea and control over the things happening to it. Thus, it can be said that in time humans also develop the same power of controlling others. They become as competent as the agents in the Matrix. Besides, in terms of morality the distinctions between humans and agents are abolished since their act of converting is not that different from that of the agents. Thus, once again, it can be argued that the boundaries between humans and machines are more blurred in animation. Both space and bodies are more easily manipulatable or it can be said that the boundary crossings and the emotional results of these changes are more easily expressible in the animation space as it allows for the creation of more fluid bodies and spaces that are the hybrids of the technological and the natural.

3.4: CONCLUSION:

As a conclusion, when all the selected scenes that involve metamorphosis are considered it is revealed that the way metamorphosis happens and the emotions it conveys are differently represented in the media of live-action and animation. The characters of the two media represent different embodied ideas, different aspects of the same dystopian world of the Matrix.

If all the mentioned metamorphosis are considered in terms of Hayles' semiotic square mentioned on page 37, it can be said that the representation of the Matrix in the live action films cannot be away from materiality which is the interaction between presence and absence according to the square. Even when the characters are uploaded into the Matrix what the audience sees is recorded, material reality. In *the Animatrix*, on the other hand, even the real world is created out of the interplay between absence and pattern. Hence, even the representation of the real world gives the impression of involving "uploaded" or "re-embodied" ideas.

As the production of the animation involves and also reveals more machine-human hybridity on the screen that also reaches the audience, in the animated films the boundaries between the good and the evil, human and machine, reality and dreams or inner world and the outer world are more blurred. As it is claimed by Cubitt, concepts rather than mere representations of the objects are involved in the animation. The fluidity of the animated bodies and space become both the expression of the change and the tools of it. As a result, *The Matrix Trilogy* and *The Animatrix* provide the audience with different perspectives about the Matrix.

Another issue, about the representation of the "same" world through different media is the way the embodiment is represented and experienced. In the live-action films not in all scenes can the actors and actresses can get in direct interaction with the environment. Some of the acting is done in front of the green-screen which means that they can just imagine or told the scene. In animation on the other hand, the animators become the actors. They fill in the space with the bodies and the objects and then they animate them as they wish. It can be said that the embodiment of the emotions, memories, history or any other possible trace from the real world is actualized by the animator. Hence, it might not be wrong to claim that the characters in the animation space are embodied with the disembodied ideas of the animators'. As animation space provides a new and more flexible, manipulatable and free environment, the embodiment of the characters in this space is also different than the live-action one.

This kind of a space provide the animator with the opportunity to choose the way s/he wants to represent, thus animation can be claimed to be more subjective. For example, The Second Renaissance I and II are like documentaries of the formation of the Matrix which is narrated by a virtual archivist. If it were to be narrated by a human

being, the machines side of the story might be again missing just as it is the case for the live-action trilogy. Although it is something produced by a human animator, it is difficult to avoid the feeling that a machine is telling the story of the machines and also the humans and as it is a machine, it is more objective.

However, as it is also observable in the recent examples[196], animated documentaries can serve to convey more individual side of an event involving memories, dreams, personal interpretations of the happenings, fears and other emotions. In the case of *The Animatrix* too the individual voices of the animators are recognizable as it is also pointed out by Joel Silver, the executive producer of *The Animatrix* series:

> "Stories and animations coming from the same place but they are all so different."[197]

In this remark of his Joel Silver is emphasizing the fact that most of the animators are Japanese, yet there is no uniformity in their representation of the Matrix.

The issue of individual voice brings about two opposing views which can be considered in terms of "freeing the mind" which is one of the tag lines of the Matrix. Does freeing the mind in any kind of virtual space bring extended experience as Pepperell claims, or the danger of standardization of the mind as explained by Manovich? If animation is considered in both terms, in what ways can it be an extended experience or the standardization of the mind?

When animation's power in expressing emotions and creating new vocabulary is considered it can be claimed that it serves for "the mind's extending out of the brain into the world and expanding the embodied awareness"[198] Thus, for the animator it is freeing the mind, abolishing bodily borders and physical rules to construct another

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[196] Walz With Bashir and Persepolis are very recent examples of animated documentaries that involve more personal accounts of events. It can be claimed that in these films animation serves to provide the personal look and feelings.

[197] Joel Silver, "Bonus Data," in *The Animatrix*, DVD, directed by Andy and Larry Wachowski (2003, USA/Australia, Village Roadshow Pictures, Warner Bros. Pictures).

[198] Robert Pepperell, "Posthuman as Extended Experience," in *Institute for Ethics and Emerging Technologies* 14 (April 2005).

world while for the audience it is experiencing the possibility of new ways of limitless expression.

On the other hand, if Manovich's claim that "the visual technologies externalize the mind and thus contribute to the standardization and translation of the individual into the public" is considered in terms of both the animated films and the story of the Matrix, it can be claimed that while the story of the Matrix supports and exemplifies this point of view, production of animated films introduces another issue which is resistance to the standardization.

In the Matrix, the whole human civilization is simulated. All the cultural norms, history, collective memory, political system etc. are preserved. Even the irregularities, diversities and deviances are constructed or at least predicted.[199] As it is a simulated system constructed in humans minds it is very easy to control or manipulate especially when they think that they have the freedom of choice. Taking these into consideration, it can be claimed that as argued by Manovich, "mental processes which are individual states, now become a part of the public sphere."[200] The mind is externalized, objectified, even calculated and standardized. Furthermore, in order for this to happen there is no need for an extreme case such as the complete separation of the mind from the body. It can be done through drawings, photographs and any visual forms:

> "Unobservable and interior processes and representations are taken out of individual heads and put outside- as drawings, photographs, and other visual forms. Now they can be discussed in public, employed in teaching and propaganda, standardized, and mass distributed. What was private becomes public. What is unique becomes mass produced. What was hidden in an individual's mind becomes shared."[201]

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[199] It should be noted that in many analysis of *The Matrix* the question of freedom and the present reality of the world we have been experiencing is based on the fact that the Matrix is the exact simulation of our world. Thus, it becomes inevitable to ask whether everything is just an illusion or not.

[200] Lev Manovich, "Visual Technologies as Cognitive Prostheses: A Short History of the Externalization of the Mind," in *The Prosthetic Impulse: From a Posthuman Present to a Biocultural Future*, edited by Marquard Smith and Joanne Morra, 203-219. (Massachusetts: The MIT Press, 2006), 205.

[201] Lev Manovich, "Visual Technologies as Cognitive Prostheses: A Short History of the Externalization of the Mind," in *The Prosthetic Impulse: From a Posthuman Present*

It is tried to be explained that the mind is tried to be made visible as a result of which it will become more controllable. Following Virilio, it is also argued that as the "inside" is made more visible it will become objective:

> "Now the virtual images of the computer screen seem to confirm not only the existence of certain forms of representation but, more immediately, the objective presence of mental images."[202]

When Manovich's arguments are considered in terms of animation it would be very easy to argue that animation is also among these technologies that are justified as cognitive prosthesis but in fact standardizing the mind. However, as it is also underlined in the previous sections animation goes beyond just being the representation of the objects or reality, but become to represent concepts from a very subjective point of view. It should also be kept in mind that animation and the way it is adopted to express concepts along with its unique and developing language do not have a one way relationship with the "representation". These representations are also derived from the lived reality.

On the other hand, animation can also be an example for Pepperell's argument of post-humanism as an extended human experience. As it is also visible in the selected scenes of metamorphosis, animation provide the animator and the audience with the extended experience of the threat of technology and its pressure on the body along with the multiple visions of the Matrix and the future. In addition, presenting a dystopian world and technology's possible effects on the body through different styles can also be considered as a resistance to or deviance from the standardization. Svankmajer's claim "mind can only be liberated by art" can be true.

Thus, it can be claimed in the case of *The Matrix Trilogy* and *The Animatrix* animation and live action cinema present both different and similar perspectives on technology which are conveyed through metamorphosis of the body which can be considered as one of the strongest tools of animation.

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to a Biocultural Future, edited by Marquard Smith and Joanne Morra, 203-219. (Massachusetts: The MIT Press, 2006), 206.

[202] Paul Virilio, *Lost Dimension* (New York: Semiotext(e), 1991), 114.

The animated films being also technological productions provide faster and more technological metamorphosis that can make the effect of technology and the fear of change very visible while the live-action films present a slower metamorphosis that reveals the powerful invasion of the body by technology. In the trilogy the spiritual or mental changes come along with the physical changes. However, in the animated films, bodies are more vulnerable when faced with technology. They bear both the fear of technology that is the result of the dystopian world that the story has depicted and also the fascination of both the animator and the audience before technology that is also employed in the production of these films. Thus, when the technology that is the reason and the theme of the film becomes the tool of representation and narration, fear is accompanied with fascination especially if the audience has some information about the software used in animation production. Yet, both in *The Matrix Trilogy* and *The Animatrix* the humans come closer to the machines while the machines come closer to the human beings. Not only machines are haunted by the humans[203] but humans are also haunted by the machines.

As a result, there are only humans and machines which embody the two races of the world. As Zion is the last human city in the whole world, there is no class difference in society. Being human and soldiers who fight against machines are the two factors that keep the people together. However, in the Matrix the whole "old" system is preserved. There is still class difference and looking at the people who wake up from the Matrix it can be said that although it is invisible there is actually class difference in Zion. Those people who wake up are those with a certain quality of life. For example, Neo or Mr. Anderson, works for a company. The Kid in *Kid's Story* goes to school, has a computer and a room of his own which are enough to show that the kid is not below middle class. Dan in *World Record* is a runner with ambition and great ability. All these facts make the possibility of a classless society that is envisioned by trans-humanism very questionable.

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[203] Erica Fudge, Ruth Gilbert and Susan Wiseman (eds.), *At the Borders of the Human: Beasts, Bodies and Natural Philosophy in the Early Modern Period* (Basingstoke: Macmillan, 1999).

In order to be able to provide different perspectives on the issue of class difference and technology related freedom a focus group study that was organized in Manisa / Soma is presented and analyzed in the next section.

CHAPTER IV

FOCUS GROUP STUDY: ON THE POSSIBILITY OF A CLASSLESS SOCIETY

4.1: TOWN OF MANISA / SOMA

All the participants of the focus group study are residents of Soma which is a small town of Manisa in the Northern Aegean with a population of 70.683 according to the records of 2007. In the town coal mining and thermoelectric power plant are among the major ways of making a living. It is predicted that there are about 10.000 workers living in the town.[204]

For the purpose of getting a job at the Ege Linyitleri İşletmesi (ELI)[205] there has been a lot of people moving to Soma from nearby villages and towns and also from other regions of Turkey. For example, in Balıkesir after the application of state policy of putting quota restrictions on tobacco and sugar beet production in the first half of the 1990s[206] which were among the main sources of income for the farmers of the region, many people started to look for other solutions. One of these solutions was moving to Soma to look for a job as a miner. Even though many could find jobs only at private mining areas that offer less money with difficult and dangerous working conditions they accepted to work as they cannot see any other solutions.

Among the subjects of this study there are also people who moved to Soma to work at the E.L.I., but they are among the ones who work for the districts that are owned by the state. Thus they have better working conditions with better wages.

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[204] http://www.tumgazeteler.com/?a=2579060.

[205] Aegean Region Coal Mining Enterprises

[206] For more news on quota restrictions on agricultural products please see websites: http://www.kenthaber.com/ege/manisa/sarigol/Haber/Genel/Normal/manisa-sarigol--tutun-ureticisi-kota-yuzunden-fidanciliga-yoneldi/haber_11215.

4.2: SUBJECTS

The subjects of this study consist of three workers of E.L.İ and their wives and three high school students. They are the ones who volunteered to be included in the study. First, some couples were determined according to their ages, and then they were called to get together for the study. Originally, more than three couples were called, however only three of them could participate.

The ages of the subjects range between 42 and 51 for the adult group. All the women are housewives and friends while all the men are mine workers at E.L.İ and co-workers. All of the men and one of the women are high school graduates while the other two women are primary school graduates. Except for Cengizhan all of them moved to Soma for their jobs from nearby towns and villages. None of the participants are computer users, but some of them can do very basic things such as google search and the others watch their kids use it. Thus they have a lot of ideas about computers.

Including high school students were not actually planned. However, the responses received from the first two groups made it necessary to organize another focus group the subjects of which were again chosen on a voluntary basis. It was decided to have another focus group with people aged 15-18 when the women who are also all mothers, mentioned that technology was diminishing the generation gap. Tevfik whose parents Metin and Serhan also participated in the study, volunteered to help me form another group which consist of him and two other friends of him.

All three students are 18 year old boys two of whom are *The Matrix* fans. They are all computer users. Two of them have been computer users since primary school third and fourth grade while the other one got his first computer when he started high school. Tevfik goes to a technical high school and studies at the department of mechanics. Onur goes to Soma Rıfat Dağdelen Anatolian High School which is considered to be one of the best high schools of Soma and he is very much interested in code writing. Hüseyin, on the other hand, is a student at the Soma Linyit High School which is a traditional high school.

In this study for the convenience of writing the group consisting of housewives is mentioned as the First Group, workers constitute the Second Group and the students are the Third Group. This is also the order in which the focus groups were carried out.

4.3: METHODOLOGY

After a short introduction of the content of the study and the Matrix films to set up the context, all groups were shown some of the selected scenes that include metamorphosis which are also analyzed in the case study were shown and were asked to interpret the scenes. Following the interpretations of the scenes they were asked to define individual and collective freedom and the effect of technology on the determination of these definitions. Some of the questions were generated at the moment of discussion without previous planning. All the participants were allowed and encouraged to mention their own experiences.

The following scenes are the ones that were watched and interpreted by the participants:

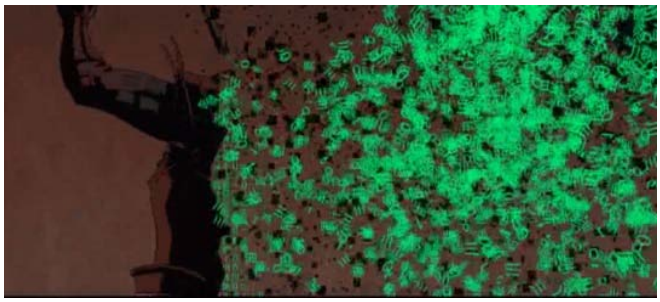

Figure 36: Transformation of a body into code upon its death, scene selected from *The Animatrix* film *Program*

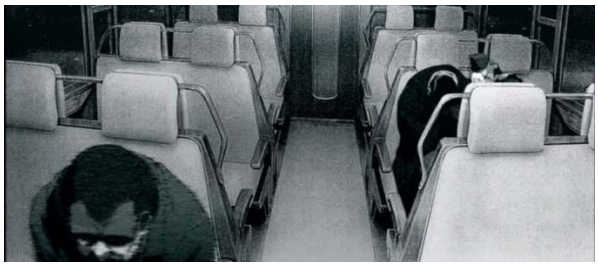

Figure 37: Metamorphosis of the passengers into agents, scene selected from *The Detective Story*.

Figures 38 & 39: Metamorphosis of the detective into an agent, scene selected from *The Detective Story*.

Figures 40 & 41: Metamorphosis of the Oracle into Agent Smith, selected from the third episode of *The Matrix: Matrix Revolutions*

Figure 42: Destruction of Agent Smith and all his clones, selected from *The Matrix Revolutions*.

It should also be noted that the study was done in three different groups of women, men and high school students, because the members of the each group were friends to each other and they feel comfortable discussing the scenes and questions.

4.4: Responses to the Metamorphosing Bodies

The interpretations provided by each group for the metamorphosis of the bodies showed both similarities and differences. They tried to guess whether the characters are machines or real people. The way the metamorphosis is represented and the media of live-action and animation had an influence on their interpretation of the sequence.

For the sequence from the animated film *Program*, shown above in the screenshot 35, all the groups, associated human body with blood and machines with code, thus they claimed that as the soldier in the picture was a robot “coded” data was

coming out of its body when it dies. They assumed that if it were a human then we would see blood instead of code, because human beings do not die like that. One of the participants in the students' group, Hüseyin, said that code might be something symbolic like blood. Thus for the robots life is code, but for the humans' life is symbolized with blood.

One of the interesting answers came from the Second Group. One of the participants stated that the green code might also be representing money. However, after they discussed the issue they agreed that the soldier was a robot and those were the "circuits" that kept him alive and when he was killed those were destroyed.

The metamorphosis sequences from the *Detective Story* from *The Animatrix* series, were found to be the most difficult to interpret by the participants. The First Group found it nonsense and considered it as just a cartoon. They also found it difficult to distinguish "robots"[207] from the human beings especially when the detective was tried to be transformed into an agent. They concluded that the detective might be resisting to the transformation, but they could not decide whether he was a robot or was transformed into one.

One of the participants in the Second Group, Metin, explained that the agents were trying to get the others in the scope of their "power of mind". Thus, for his all the physical transformation was an indication of a change in mind. Cengizhan, on the other hand stated that all the characters were robots, but Trinity and the detective were chased by the others because they were trying to "wake up" and "be humans". He explained that Trinity shot the detective because he could not achieve to wake up and get back into his "human" form. The more they talked about it the more confused they became. They even started to question whether that was Trinity's original form or she was transformed too, because with her black clothes and glasses she looked very similar to the agents.

Among the boys, as he was very interested in coding, Onur was leading the discussion. He simply explained that most probably the system of the virtual world was about to collapse, because the codes were mingling into each other. Tevfik claimed that the agents were viruses that try to control humans who are also part of the system while

[207] Both the women and men's group called agents "robots".

Onur considered the detective as another program that collapsed when he was not protected from the agent. Hüseyin, on the other hand, was concerned with the agents' having multiple copies. He and Tevfik were confused about the metamorphosis' being a voluntary or an involuntary action. They could not tell whether the humans were allowing the agents to transform their bodies or not.

Agent Smith's transformation of the Oracle into himself was watched and analyzed by the First and the Third Group, but not by the Second group due to time limitations. The First and the Third group, however, found it difficult to analyze.

Serhan, from the First group stated that at first she thought that the Oracle was a human being, however when she was transformed she changed her mind and thought that she was a robot too. According to her Agent Smith was transferring data or uploading a program into her, so that she changes into Smith. Kadriye did not agree with Serhan and sclaimed that the Oracle was a human, but she added that the way the agent transforms the Oracle was also very stupid as he was performing the act of metamorphosis "by hand". Emine also stated that it was either energy or data that was transferred to the body of the Oracle. However, the three could not reach a conclusion about the Oracle and the reality about her material body.

Each member of the boys' group, on the other hand, came up with a different explanation for the Oracle's transformation. Tevfik considered and explained the whole process as invasion of all the files of a computer by a virus while Hüseyin got confused about the bodily existence of the Oracle. Onur, on the other hand, stated that as she is the Oracle, she predicted what would happen and let Smith transform her on purpose. In this way she could leak into the others' bodies:

> **Onur:** Kahin zaten önceden ne olacagını tahmin ediyor. Ona gore önlemini almış ve onların sistemine sızıyor. Ötekileri de etkiliyor.
> ***"The Oracle predicts what will happen and she takes the necessary precautions and she breaks into their system, she affects them."***
>
> **Hüseyin:** Yani o işlemden (he means the metamorphosis) sonra kahin hala orda oluyor mu? Vücut olarak yapısı orda mı?
> ***"So, after the metamorphosis is the Oracle still there, I mean as a body?"***
>
> **Tevfik:** Bence bu, yani böyle bilgisayar olarak düşünürsek bunu, bunlar (he means Agent Smith and his clones) virüsler. Komple bilgisayarın

her tarafını sarıyorlar ve her dosyayı da kendilerine benzettiler. Şu anda da Kahin'i de kendi içlerini aldılar. Bunu da Neo'ya karşı kullanıcaklar.
"I think, if we consider this as a computer, Agent Smith and his clones are virus. They invade the computer and turn every file into themselves. Now, the Oracle is also transformed into one of them. They will use this situation against Neo."

Hüseyin: Tamam alsınlar… Aldıklarını biliyoruz da… Aldıktan sonra o Kahin hala orda mı?
"Yes, I know that, but after the transformation is the Oracle still there?"

Onur: Kahin hepsinin içine sızdı. Hepsinin (he means Smith and all of his clones) içinde Kahin şu anda.
"The Oracle has leaked into each of them. She is now "in" all of them."

Hüseyin: Masadan yok oldu yani?
"So, she disappeared from the table?"

Onur: Masadan yok oldu. Hepsinin içine girdi.
"She disappeared from the table, leaked into every one of them."

Münire: Başka?
"What else?"

Hüseyin: Kurabiyelere yazık oldu.
"Poor cookies".

At the end of the discussion Hüseyin did not look that satisfied with the explanation, but nodded his head and when they were asked whether they had any more things to add he just said that he is sorry for the cookies that Agent Smith smashed into pieces.

The last sequence that was screened is the Neo's destruction of the Agent Smith and all of his clones as a result of which the war between machines and humans end. Both the women and the men were fascinated with Neo's power as a human being. However, there were also some controversial issues that changed the course of the discussion into the question of what makes humans different from the robots. All three groups defined Neo with three different humanly features that made him defeat Agent Smith.

Serhan from the First Group stated that she found the ending very fascinating as it is also the triumph of humankind. She said that this was the way it was supposed to

end, because no machine can be superior to human beings as they are created by humans. She added that Neo's destruction of the Agent Smith and all his clones was symbolizing humans' resistance to become machines which was another fascinating thing about the ending. However, Kadriye was not that sure about the winner as everyone in the scene was destroyed. She explained that either there was no winner or it was the humans who won, but after Serhan's assertion that the created cannot defeat the creator she seemed to agree. They concluded that it was the "power of humanity"- insanlığın gücü- that won. Kadriye added that after all they were robots who cannot taste, feel pain or pleasure, so it would not be fair if they won.

The Second Group also concluded that the winner was the humans. At first they were confused with Neo's transformation into Agent Smith, because although Neo seemed so powerful he was also destroyed which they found very difficult to explain:

> "**Cengizhan**: Hem dövüştü hem çatladı.
> ***"He both fought and he cracked.***
>
> **Halil İbrahim**: Neden öyle oldu?
> ***"Why did it happen like that?"***
>
> **Metin:** Enerji fazla geldi bence.
> ***"I think he had too much energy."***
>
> **Cengizhan:** (Talking about Agent Smith) Dönüştürmesine izin verdi Neo ama niye izin verdi? Sonunda hepsini öldürebilmek için mi?"
> ***"Neo let them transform him, but why? In order to be able to kill them all in the end?"***

Then, they concluded that Neo sacrificed himself for the survival of the other humans. Cengizhan added that "sacrificing" is one of the most significant things about being a human, it was actually what makes a human "human". As they did not want to talk any more on the scene, they ended their discussion by emphasizing the importance of humans' sacrifices for each other.

The Third Group also agreed to the idea that Neo sacrificed himself to end the war. Onur explained that the system collapsed because of Neo's strong belief in the truthness of the values he has been fighting for. His belief and energy were too much for the system to handle, hence the system exploded:

> "İnandığı değer uğruna savaşarak en sonuna geldi artık, en son ya kendisi de yok olucaktı. Bunu bile bile en sonuna kadar geldi. Son

enerjisini verdi. Sistem kabul edemedi bunu. Çok yüksek geldi enerjisi buna inandığı için… Buna çok inanarak yaptığı için…kendi enerjisi yüksek geldi. Sistemi patlattı artık."

"He fought for the values he had believed in till the end, he reached the end and he was to be destroyed… Knowing this he reached the end and spent his last bit of energy. The system could not handle it. Because of his belief his energy was too high for the system. Because he did what he did with belief… His energy was too high to handle. He destroyed the system."

Tevfik, on the other hand, considered Neo like a part of a computer system and claimed that it was Neo's bravery and confidence that destroyed the system and maybe he was the anti-virus program.

When the responses of all three groups are considered, the words they have chosen to define Neo and / or his ability to destroy Agent Smith and his clones are notable. While the First Group prefered to use the word "power" and underlined the superiority of the creators over the created, the Second Group chose "sacrifice" to distinguish humans from robots. For the Third Group on the other hand, it was the belief, energy and confidence that destroyed the system.

In general it can also be said that, as expected the Third Group used more computer terminology and found the sequences easier than the other two groups to interpret. It is also notable that all three groups considered the code and blood in similar terms: Code was the life for the machines while blood was the life for the humans. For this reason when the human bodies were transformed into agents some of the participants got confused and found it difficult to differentiate the humans from the machines.

Another significant issue that was underlined in the explanations of the metamorphosis was the resistance of human beings against becoming robots. Based on the participants' explanations, it can be concluded that it was for the most part the emotional side of humans, beliefs, confidence and will to or choose to sacrifice etc., that distinguished humans from the robots. Especially The First Group seemed relieved and happy that the humans were the winners. The Third Group on the other hand, remained more neutral.

4.5: ON TECHNOLOGY AND FREEDOM

After the interpretations of the sequences that involve metamorphosis, the participants were asked to define individual and collective freedom and its relation to technology. It can be said that the answers of each group varied according to age, gender and occupation.

The First Group stated that there were both advantages and disadvantages of technology. They explained that technology was making people lazy while it also creates more time to spend for themselves and their children. According to the First Group, they could communicate better with their children thanks to technology. As technology made their housework easier they had more time spend with their children. Besides, they asserted that television played an important role in the change of relations between parents and children. Television provided models and also educated people. They had a chance to observe other lives through television and as they watched the programs their kids watch they have started to understand their kids more. Unlike their own parents, they raised their kids not in accordance with customs. They asserted that technology was then diminishing the generation gap. Although, sometimes it hinders genuine communication, it was providing better understanding between generations.

Individual freedom was defined as freedom to reach information by the First Group. They told that the most significant freedom for a woman is to be able to make her own living. All the participants explained how unhappy they are that they did not have a job because they did not have a degree. Emine's parents did not consider it very necessary for her to continue her education while Kadriye's parents did not let her go to another city for her education after primary school because of the military coup of 1980. Serhan's father on the other hand, wanted her to go to university; however, she could not pass the entrance examination. She told that her brother went to Ankara for his college education, however because of the military coup and the following political events he had to come back home. She emphasized that his books were collected.

Emine pointed out that there should not be gender discrimination and Kadriye supported this idea by saying that women were as competent as men and sometimes they were even better. Serhan asserted that having the right to decide for yourself and realize your own decisions are very important elements of freedom.

The First Group also complained that they do not have enough freedom in society. They asserted that especially women are affected negatively by the traditions and customs, because they cannot choose to live in the way they want to. They agreed to each other that the situation might be different in bigger cities, but in the small town of Soma they could not tell their opinions freely, sometimes they cannot even dress as they like, because society was coming before them. They complained about being have to watch their behaviors whenever they are outside because they might be "misunderstood" or other people might gossip about them.

The Second Group associated freedom of the society with economic freedom. Metin stated that technology brings freedom just to the rich nations or rich individuals. He talked about a private mining district, Karanlıkdere, where about 200 workers left unemployed as the company bought a machine that was quicker and cheaper than the workers. He stated that the machine might be more efficient; however, as there is no other section of employment in the district for the workers they were dismissed.

Metin also mentioned a future scenario about the war between machines and humans. He said that if there would be any wars between humans and machines it would be between workers and machines and their bosses, because the machines make people unemployed.

Halil İbrahim agreed with Metin and added that machines also "robotize" human beings. They replace human beings and leave them "useless". Instead of the humans machines do all the work, hence people start to become lazy as a result of which they lose their "human" ness. He also added that the existence of machines make the existence of the trade unions unnecessary.

They also mentioned another example of machines' replacement of human beings. As mentioned at the beginning of the focus group study, in Soma there are a lot of people working for the thermoelectric power plant. Some of these people are transporters of coal. Metin explained that a band for the transportation of the coal has been built and when it fully functions there might not be need for the transporters which will again create an unemployment problem. He also stated that the band is much better than trucks: it does not need fuel oil, it does not need humans and it is also safer for the environment as unlike trucks it does not pollute the air. However, he said, there is no other way of making money for these people working as transporters.

Halil İbrahim added how things changed after machines started to be used for agriculture. His family was a farmer and he is also still interested in farming, so he had various examples to talk about. One of the examples he mentioned was about planting tobacco:

> "Biz tütün dikiyorduk eskiden. Bir ay karık çekiyorduk. Bir ay boyunca elle tütün dikiyorsun. 10 dekarlık tütün dikiyorsun. Bir ay dikiyorsun. Makina çıktı sonra, 10 dekarı 2 günde dikiyo. İnsanlar hem rahatladı, hem sağlık açısından daha rahatladı hem de tembelleşti."
>
> ***"In the past we were planting tobacco. We were working in the field for a month to do it. For a whole month we were planting tobacco by hand. 10 decares of tobacco… For a whole month… Then came up the machine, it plants 10 decares of tobacco in 2 days. It made people healthier and also lazier."***

This idea was linked to obesity by Metin. He claimed that the rate of obesity increased in Turkey as people become more engaged with technology.

In terms of the individual freedom, on the other hand, the participants in the Second Group presented controversial ideas. Metin claimed that individual freedom was some concept that was the result of imitating Europe. According to him, the social norms were collapsing and young people were becoming careless about the elders and also their nations because of that emphasis on the individual freedom. Somehow more freedom brought more disrespectfulness. He stated that he was afraid that the family structure in Turkey will change in time and will become "European". He was not very content with the idea that his 18 year old son could leave home and do whatever he wants to without informing his family about his decisions and actions. He thought it was too early to be "free":

> "Zaten insan belli bir yaşa geldikten sonra ister istemez anneden babadan ayrıldıktan sonra özgürleşiyor, evlendikten sonra özgürleşiyor. Ama şimdi bilmiyorum bu özgürleşme biraz da çok erkene alındı."
>
> ***"People, whether they want it or not, become free after a certain age, after they get married. But now, I don't know, it looks like this liberation has started to happen earlier (before marriage). "***

Cengizhan, on the other hand opposed Metin's understanding of freedom. He affirmed that freedom does not necessarily mean violating social norms of respect. Although everyone is free they also have to comply with the social rules. Total freedom is possible only in one's thoughts. However, he said, in Turkey people are not free even

in their thoughts and added that this was proved in the case of 1980s. Then they discussed the 80s for a while. Halil İbrahim and Cengizhan explained that the youth of 80s sacrificed themselves in the search of freedom. They also confessed that they were not that knowing about their choices but they were just defending the idea of equality of all communities and they wanted "iş"[208] and "aş"[209] for everyone.

Through the end of the discussion they concluded that today, young people were more knowledgeable and confident. They can make their own choices. Metin stated that this was because of technology. They found this very natural because it is easier for them to reach information. They also compared the way they were treated by the elders and the way they treat their kids now. Then they concluded that both the change in the way the kids are raised and technology had a positive effect on today's young people being more successful about everything.

The Third Group on the other hand, started with defining the individual freedom. Onur said that it was doing whatever you want to without violating other humans' rights. To this definition, Tevfik added the idea that freedom also includes being able to "stand on your own feet". Hüseyin expanded this idea as being without a family that always protects and supports children. However, this idea was challenged by Onur's questions and the following dialogue occurred between Hüseyin and Onur:

> **Onur:** Tek başına ayakta durunca aile kurmak istemeyecek misin?
> ***"Will not you want to have a family when you are able to stand on your own feet?"***
>
> **Hüseyin:** Ona daha var, benim yaşım küçük.
> ***"I still have time for that. I am too young."***
>
> **Onur:** Tek başına ayakta duruncaya kadar yaşın kaç olucak?
> ***"How old will you be when you are able to stand on your own feet?"***
>
> **Hüseyin**: Bilemem…
> ***"I can't tell."***

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[208] "iş" means "job" in Turkish.

[209] "aş" means "food" in Turkish.

After this dialogue Onur concluded that “the system” forces us to have a new family of our own and we will be making a free choice if we refuse to have a family. Hüseyin on the other hand, claimed that everyone has a “free” stage in life when they are alone, however after a while they need to have a family so that they can raise free individuals. Tevfik agreed to Hüseyin’s ideas, but Onur asserted that the families restrict individuals’ freedom.

The freedom that is or can be provided by technology was again associated with reaching information quickly. They all agreed that it is easier for them to reach information both at school and via computers. Tevfik also told that his father’s generation was not that lucky because physical violence was practiced at schools by teachers, so they could not even ask a question. However, now, he said, they had more sympathetic teachers with whom they could communicate easily. Tevfik explained this situation as the “modernization of the Ottoman people who were always expecting unconditional respect from the younger ones.” He also said that he is very happy that he is friends with his father and apparently this was something his father could not even dream of.

Onur added that technology was making it easier for us to reach information which provides people with more time to improve themselves more. Besides they all considered themselves luckier than their parents are because they had technology and they did not have to go through the entire struggle their parents or grandparents did such as political conflicts, wars, lack of food etc.

Different than the first two groups the Third Group focused mainly on computers when they are asked to talk about freedom and technology. Two of the participants also mentioned the cell phones as tools that make communication easier, but computers and internet were the main focus of their discussion on technology.

Tevfik explained that the internet is a great thing, but people should be careful using it, because it is very “absorbing” and it is very easy to lose control of the real life. They all draw a clear cut border between the virtual and the real world. They explained that the virtual world has its own rules and ways and it is definitely very different and separate from the real world. Onur claimed that “sanalda olan sanalda kalır” which

means that what happens in the virtual world stays there and cannot have any effects on the real lives of the computer users. He said what we encounter in a virtual world may not even be a person but just a code. He also asserted that the virtual world provides more freedom as the person has the power of turning of the computer and "end" the virtual world whenever s/he wants to.

However, Tevfik did not agree to this opinion of Onur's. He though that real life was better because it provides people with feelings. He explained that he likes cars and he prefers to look at and touch one in real life instead of looking it through a computer screen, because that was giving him a different sense of feeling. Hüseyin and Onur opposed Tevfik's ideas and asserted that the virtual world was more free and better as it gives the user the chance of "creating" everything as s/he wishes. Tevfik tried to make himself clear through an example of a glass cup:

> **Tevfik:** Şu bardağa bir gerçekte dokunuyorsun, bir de sanal ortamda yapıyorsun, bardağı görüyorsun. Sence hangisi daha güzel olur?
> ***"Which one is more beautiful? Touching and feeling this glass in reality or creating it in a virtual environment?"***
>
> **Onur:** Bu bardağı… Ya güzellik söz konusu değil şu an, güzelliği tartışmıyorum zaten de… Şimdi bu bardağı sanal dünyada yok edebilirsin ama gerçek dünyada bunu yok edemezsin asla. Bardak yok olur ama parçacıkları kalır.
> ***"This glass… But here we are not talking about beauty. I am not discussing the beauty of it. Now, you can destroy this glass in the virtual world but in the real world you can never do that. The "glass" will be destroyed but its pieces will remain."***
>
> **Tevfik:** Ama işte bu gerçek.
> ***"But this is real."***
>
> **Onur:** Tamam gerçek işte.
> ***"Yes it is."***
>
> **Tevfik:** (Sanal ortamı kast ederek) Orda nasıl olsa silersin tekrardan bunu baştan yaratırsın değil mi?
> ***"There (he means in the virtual world) you can delete and create it again right?"***
>
> **Onur:** Tamam işte daha özgürsün orda yani.
> ***"Yes, so you are freer in the virtual world."***

Hüseyin and Onur provided another example which was about the simulation programs for pilot training. They claimed that the consequences would be worse if the

pilots were being educated with real machines in real life, but in the virtual world one never has to deal with serious consequences because it is virtual. Tevfik insisted the virtual world is not always that perfect and gave an example related to his studies at school. He explained that sometimes when he writes a program for a part of a machine he first tests it through a simulation and it seems to function perfectly, however when it is used in real life with real machines it might not work at all. In the end as they could not convince each other they decided not to talk about it anymore.

Finally, Onur and Tevfik considered the virtual world and the real world completely separate from each other while Hüseyin stated that there is somehow a connection between the two worlds. However he chose not to elaborate on the issue.

4.6: CONCLUSION:

The data collected with and from 9 people, who were separated into 3 groups according to their occupations and ages, showed that interpretations of the chosen sequences and the explanations about the technology-freedom relation vary according to the individual needs, occupation and the ways they engaged with technology.

Although the questions the participants were asked were related to the film sequences that involve metamorphosis the answers they gave were mostly involved with their general look at the technology and the way it functions in society and also in the family. Their responses reflected a more local or individual sense of fear towards technology. The participants also tried to deal with human power over technology or vice versa. While The Second Group's responses were more related to their occupation as miners and their fear of being replaced by machines, The First and The Third Group's responses did not deal with the same fear of replacement. They all seemed to agree with the idea that the triumph of machines over human beings was impossible.

Another factor that had an influence in the responses of especially The Second and The Third groups was the main stream science-fiction movies such as *The Terminator* and *Star Trek.* Some of the participants mentioned the possibility of these

films' turning into reality and the focus was on the inventions of the machines in those movies that would make human life easier, but not on the way the human body was metamorphosed or getting affected by these developments. The First Group on the other hand was not that interested in the science-fiction movies, but preferred to mention their own personal employment of technology in their daily lives such as the kitchen tools and television.

In terms of the interpretations of the chosen sequences, The First Group focused more on the power and resistance of the human beings against machines. They were fascinated when Neo destroyed Agent Smith and all his clones. They interpreted this as an exact triumph of human beings. Freedom for them was to be able to reach information, to "stand on their own feet" which could be done through education and getting a job. They also regarded technology as bridging the gap between generations.

The second group on the other hand, associated issues more to economy. They were not that comfortable about the way technology was changing the society and the working conditions. They have even foreseen a possibility of war between the "bosses" and workers. The fear of replacement by the robots was more visible in this group. While the others mentioned the superiority of human beings over robots they mentioned the opposite. As a worker, machines were cheaper and more efficient. Thus technology was bringing freedom only to the rich people or rich countries.

The Third Group found it easier than the other first two groups to interpret the sequences from the Matrix. They talked more about computer technologies and the power of virtual world of the internet and / or video games and simulations. They provided two different perspectives on the issue. While two of the participants considered the virtual world as endless possibilities, the other participant found it too fake and he was not that satisfied with the conditions of the virtuality. The participant clearly stated that he chose the reality of "feeling" over endless possibilities.

The different perspectives the three groups presented about the family were also very notable. The First and the Third Groups stated how close they could get with each other as parents and kids while the Second Group had controversial ideas about the future of the family as a significant institution in society. In addition while Metin from

the Second group considered starting a family as “özgürleşme” (getting more freedom) Onur from the Third Group insisted that the family was one of the factors that hinder human’s freedom.

In the light of these data, it can be claimed that different perspectives on technology were shaped by the age, individual experiences, occupation and different engagements with technology. The responses of the three groups have presented a varying understanding of technology even within the same social group and even within the same family. While it was a liberating tool for the Third Group it was a tool for teaching for the First Group. The Second Group on the other hand was not sure about the total goodness of technology. They considered technology more as tools replacing human beings. They constructed and presented a kind of a hierarchy where third world countries were prosthesis to the first world countries and the workers and machines were prosthesis to capital owners.

Based on these data the following questions can be asked:

- Will the transition to trans-humanity or post-humanity be experienced really equally and can post-humanity abolish borders of social classes?
- Who is “we” that is mentioned in a lot of texts about post-humanity?
- Can what the First Group defined as the diminishing of generation gap, be standardization of the mind?
- Is transhumanity defined in different ways by different social classes or occupational groups?

Although this focus groups study reveals that the relationship between social class, age, occupation and the understanding of technology, it fails to provide clearer and more detailed answers for the questions asked above. Further study that involves more diverse occupational, social and age groups can be done to provide a deeper understanding of the issues related to fear of humans’ replacement by machines, possibility of abolishment of social classes and liberating force of technology.

CHAPTER V: CONCLUSION

This study emerged from the analysis of the animated bodies as post-human bodies that reflect fears, anxieties, memories, pressure and hybridity which might be results of animation's close relation to technology and software development. Parallelisms between the dystopian fear of replacement of human beings by machines or the fear that humans will lose their bodily integrity and these fears' and anxieties' real life reflections tried to be drawn by means of a case study and a focus group study. Thus, this study started in the virtual space of the animation and extended beyond it in terms of including other people who have distinct relations to technology.

The fear that the humanity will end with the people's development into post-humans and the fear that cinema might end because of the developments in the animation software provided another ground for the parallel analysis of animation and post-humanity. In this context animated films were analyzed in terms of being a cognitive prosthesis, mere prosthesis to cinema and a tool of expressing more feelings on to the screen which lead to the discussions of whether visual technologies provide extended human experience as prosthesis to mind or whether they standardize the mind.

The case study which compares the representation of the human body and its metamorphosis in relation to technology reveals that in the animation space there is less distinction between the things and the human beings. Both space and the human bodies are equally vulnerable to change. Besides, the feelings and thoughts can also be made visible through the metamorphosing bodies.

Another issue that makes animation distinct and significant is especially Japanese animation's claiming itself to be stateless. Although Japanese animation is mentioned with a different name "anime" and has a distinctive style that makes it attributed to a single "nation", Japanese animators claim that anime does not have a

national identity, it is stateless, it is another world created by animators who are themselves stateless.[210]

Calling anime "exotic" is considered as "techno-orientalism" and it is stated that unlike live-action anime has the freedom of being context free. Thus, flexibility, creativity and the free styles of the characters serve for increasing attraction in global culture:

> In fact the popularity of anime, both in Japan and abroad, attests to a new kind of hybridity on the part of a global younger generation."[211]

This hybridity Napier is talking about lacks power relations, it is neither more Japanese nor Western, but it is a more equalizing hybridity. It can be said that Napier's claim is actualized in the production of the *Animatrix* series which brings directors from different backgrounds and their individual animation techniques together. Neither the *Matrix Trilogy* nor *The Animatrix* is easy to categorize according to one single technique.

When all animated films are considered from this perspective, it can be easily claimed that all the animated films have the same potential for freedom, flexibility and creativity. Thus they can actualize Svankmajer's claim the mind can be liberated only through art. Hence, although animation can be considered as a process of externalization of the mind, it does not necessarily have to be standardization of it. Instead, all the mentioned animation techniques can serve as a resistance to or deviance from the imposed or naturalized ideologies.

In the live-action film on the other hand, it is the green screen that provides the repeat and quick change which expresses the instability and the blurring boundaries of the human body and the nature. The only sequences that involve metamorphosis are the

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[210] Susan J. Napier, *Anime From Akira to Princess Mononoke* (New York: Palgrave Macmillan, 2001).

[211] Susan J. Napier, *Anime From Akira to Princess Mononoke* (New York: Palgrave Macmillan, 2001).

ones that are achieved through animation technology.[212] Looking at the scenes analyzed it can be claimed that in the live action film the human bodies are more preserved and maintained more stable than the environment and look both more resistant and vulnerable to the intervention of technology.

Besides, as it was also observed in the focus group study, the reactions live-action sequences created in the audience is different than that of the animated sequences. The audience reacted more emotionally to the live-action ones, because it feels more "real". What is happening seems to be happening to the real human bodies. Thus it creates more anxiety, fear and confusion.

It is also notable that the distinct responses that were elicited in relation to live-action and animation metamorphosing sequences were not in line with the theory of animation presented in this study. In contrast to the claim that animation is more than a medium of conveying humor, the participants did not consider animated sequences as seriously as they considered the live-action ones. One of the participants in the First Group even stated that it was okay for her daughter to watch the animated film although it contains violent sequences because it was just a cartoon and thus there was nothing to worry about. Despite its content that deals with "serious" issues, the animated films were treated as films of humor that are produced especially for the entertainment of children.

However, it should also be reminded that in this study, sequences were chosen only from *The Matrix* and *The Animatrix* series where it is easy to distinguish the animation form the live-action. If hybrid films or complete 3D CG films such as *Final Fantasy: The Spirits Within*[213] or *Immortel*[214]were shown different responses might be elicited as these films include very realistic 3D animated characters and even the interaction of real actors with the 3D ones.

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[212] Agent Smith's transforming the human bodies into himself are the examples of such cases.

[213] *Final Fantsay: The Spirits Within*, DVD, directed by Hironobu Sakaguchi and Moto Sakakibara, (2001, Japan, Columbia Pictures).

[214] Immortel, DVD, directed by Enki Bilal, (2004, France, Charles Gassot).

The focus group study on the other hand revealed some diverse ideas about technology, freedom and interpretations of popular films which can shed light to different understandings of post-humanity and technology's intervention into human life and body. Some of the issues discussed about transition to post-human life in the first chapter were also mentioned by the participants of the focus group study as well some of which are replacement of human beings by machines, changing family values and relationship between the creator and the created.

The strongest aspect of the focus group study was its involvement of different age and occupational groups. Thus it is predicted that when the study is repeated with more diverse groups from different cities or countries more information can be gathered about post-humanity's relation to class difference and technology's possible power of uniting the classes and nations (the idea of which would be similar to that of Japanese animation).

In addition, in the future studies further questions can be included in the focus group study about religion and family as they are turned out to be two of the most discussed issues in this study.

As a conclusion, it can be claimed that further responses from people of different age, occupation and nation the "we" which is always used in the texts about post-humanism, but never fully explained will be able to be "disintegrated" as a result of which it may be enlarged to include more views and people from diverse backgrounds.

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APPENDIX A

Trans-humanist Declaration:

(1) Humanity will be radically changed by technology in the future. We foresee the feasibility of redesigning the human condition, including such parameters as the inevitability of aging, limitations on human and artificial intellects, unchosen psychology, suffering, and our confinement to the planet earth.

(2) Systematic research should be put into understanding these coming developments and their long-term consequences.

(3) Transhumanists think that by being generally open and embracing of new technology we have a better chance of turning it to our advantage than if we try to ban or prohibit it.

(4) Transhumanists advocate the moral right for those who so wish to use technology to extend their mental and physical (including reproductive) capacities and to improve their control over their own lives. We seek personal growth beyond our current biological limitations.

(5) In planning for the future, it is mandatory to take into account the prospect of dramatic progress in technological capabilities. It would be tragic if the potential benefits failed to materialize because of technophobia and unnecessary prohibitions. On the other hand, it would also be tragic if intelligent life went extinct because of some disaster or war involving advanced technologies.

(6) We need to create forums where people can rationally debate what needs to be done, and a social order where responsible decisions can be implemented.

(7) Transhumanism advocates the well- being of all sentience (whether in artificial intellects, humans, posthumans, or non-human animals) and encompasses many principles of modern humanism. Transhumanism does not support any particular party, politician or political platform.

(Can be accessed from the website:
http://www.transhumanism.org/resources/TenQuestions.pdf.)